

About AviLxp

Click on the icon at the top of this page.

Context Sensitive Help

You can get Context Sensitive Help on any <u>Item</u> while you are in the application by simply pressing the **Right** mouse button over the Item. This will work even when an item is insensitive (grayed out).

Why AviLxp

Here is why

How to

- Open an AVI file
- Play a File
- Set the Playback Mode
- Select a portion of an AVI file for Playback
- Set the Speed of the Playback
- Setting the Type of Playback

The Main Window

- The Front Panel
- Menu Bar Commands
- Track Bar
- Button Toolbar Commands

Glossary



Having Trouble With AviLxp?

AviLxp Information

AviLxp version 1.0. © 1995 by Scientific CD Movies, all rights reserved.

AviLxp is a AVI Movie Player with several specialized features, such as:

- Zooming and Cropping
- Playing Forward or Backward
- <u>Looping</u> and <u>Rocking</u> Playing Modes
- Variable Speed Selection
- Playing without Skipping Frames

The AviLxp player is a C++ application developed specifically for **Windows 95** and **Windows NT** platforms.

AviLxp is based on a totally <u>Modeless</u> interface. As you enter values in the dialog boxes you do not have to close them before your changes take places. For example, you can change the playing speed value and replay the selection at the new speed without closing the Speed Settings dialog box.

Scientific CD Movies can produce movies of your 3 Dimensional data and output a custom CD Rom with the AVI Movies of your data.

We also do custom software development of multimedia and scientific applications.

See our Web pages at: http://www.scdm.com

For more information contact:

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or

Nicola Papp (nicola@scdm.com)

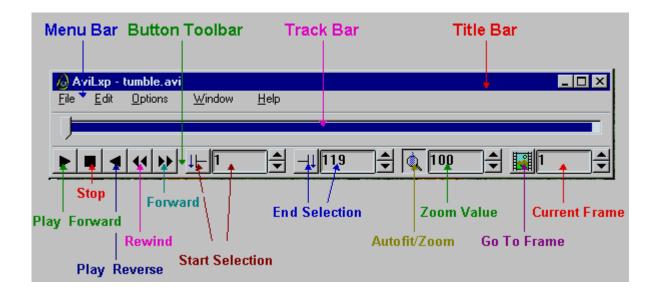
Here is Why

We looked at AVI players on the market, and found that all of them had no other functionality besides playing, and stopping. That functionality may be enough for entertainment movies, although even there it would be nice to play a selection over and over; zoom in it; slow it down; and crank it up; etc.; etc.

All of these and many more new features are in AviLxp. These features are very useful and necessary for animations of 3D data.

In future releases we will support palette change, indexing , digitizing, choice of sound track, and more.

The Front Panel



The front panel is composed of a Menu Bar, a Track Bar and a Button Toolbar.

The Menu Bar Commands

Menu Bar Commands

From The Menu Bar you can access the following pulldown menus:

- <u>File</u><u>Edit</u>
- Options
- Window
- Help

The Button Toolbar

Button Commands



Play Forward



Stop



Play Reverse



Forward



Rewind



Select Start Frame



Select End Frame



Toggle Zoom/Autofit Mode



Goto This Frame

The File Pulldown Menu

The File pulldown menu allows you to open a movie file, register an evaluation copy, and exit the application.

- Enter Registration Keys...
- <u>Open</u>
 <u>Exit</u> Open...

Back to the Menu Bar Commands. Back to the Table of Contents.

The File/Enter Registration Keys Command

This command displays a dialog box in which you may enter the registration keys.



- <u>Name</u> The registration name
- <u>ID</u> The registration ID

As soon as you send us your licensing information, we will send you a Name and an ID to input in this dialog box in order to register your copy of AviLxp

After you have registered your copy of AviLxp, this command will not be available the next time you use the application.

Registered copies do not have any Delays while opening files and playing movies.

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The Registration Name

Here you enter the Registration Name. We send you the Registration Name after we receive your order. Make sure that you type the name exactly as its shown on your registration info. Include any white spaces.

Back to the Registration Keys Dialog Box Back to the Table of Contents.

The Registration ID

Here you enter your 10 characters Registration ID. We send you the Registration ID after we receive your order. Make sure that you type the ID exactly as its shown on your registration info.

Back to the Registration Keys Dialog Box Back to the Table of Contents.

The File/Open Command

If you are running under Windows 95, this command will display the Windows 95 file selection box, with the preview option. If you single click on a file name, you will see a movie preview in the right part of the dialog box.

If you are running under Windows NT, this command will display the Windows NT file selection box, without a preview option

You may only open files of type <u>AVI</u>. If the file extension of your movie is not <u>AVI</u> or your file is not in <u>AVI</u> format, you may not play the file with this application.

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The File/Exit Command

This command terminates the application.

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The Edit Pulldown Menu

The Edit pulldown menu allows you to copy a movie frame to the clippoard.

• <u>Copy</u>

Back to the Menu Bar Commands.

Back to the Table of Contents.

The Edit/Copy Command

This command copies to the clipboard the portion of current movie frame displayed in the projection window.

The picture is copied to the clipboard in standard Windows Bitmap format. You can then paste it in any application which supports image pasting.

Back to the Edit Pulldown Menu. Back to the Table of Contents.

The Options Pulldown Menu

The Options Pulldown Menu allows to customize playback mode, speed, frame step increment and annotation units.

- Play Mode...
- Speed...
- <u>Step...</u> <u>Units...</u>

Back to the Menu Bar Commands. Back to the Table of Contents.

The Play Mode Dialog Box

There are four options of playback mode:



These modes have the following effects:

- Stop will stop the playback of the movie after playing it once.
- <u>Stop and Rewind</u> will stop the movie, and set the frame number to the beginning of the selection. Then the next play command will start the movie from the selection beginning.
- Loop will play the movie, rewind the movie, and play the movie again.
- Rock will play the movie forward until the end, and then play the movie from the end to the start (in reverse), and then repeat the process.

Back to the Options Pulldown Menu. Back to the Table of Contents.

The Stop Option

The **Stop** option will cause the <u>playback</u> to stop when the end of the <u>selection</u> is reached.

<u>Back to the Playmode Dialog Box.</u> <u>Back to the Table of Contents.</u>

The Stop and Rewind Option

The **Stop and Rewind** option will cause the <u>playback</u> to stop and rewind to the beginning of the <u>selection</u> when the end of the movie is reached.

The Playmode Menu Loop Option

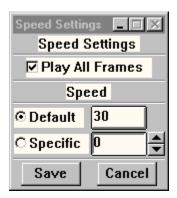
The **Loop** option will cause the <u>playback</u> to continue from the beginning of the <u>selection</u>when the end of the selection is reached. This process is repeated until stopped by the user.

The Playmode Menu Rock Option

The **Rock** option will cause the <u>playback</u> to play in reverse when the end of the <u>selection</u> is reached. This process is repeated until stopped by the user.

The Speed Dialog Box

This dialog box allows you to specify the options associated with the speed of playback.



You may specify the following option:

• <u>Skip Frames if Behind</u> When checked, the movies will play at the set speed and will skip frames as needed to maintain the speed. Otherwise, the program will play all the frames as fast as possible, but not faster than the specified speed.

You may chose to play the movie at its

- <u>Default</u> speed, or give a
- Specific speed for the playback, in frames per second.

Back to the Options Pulldown Menu. Back to the Table of Contents.

The Skip Frames if Behind check button

When checked, the movies will play at the set and will skip frames as needed to maintain that speed. Otherwise, the program will play all the frames as fast as possible, but not faster than the specified speed.

Depending on the type of hardware you have and on the size of the movie frames, it may not be possible for the program to play all the frames in the movie at the selected speed. In which case you must decide weather you want to keep the speed and skip frames, or play all the frames and loose speed.

NO SOUND ????.

If this button is not checked the program will not be able to play the sound track on the movie.

Default Playback Speed

The **Set the Speed to Default** option of the menu is used to set the playback speed to the rate specified in the <u>AVI</u> file. This is the rate used when the movie is created and is the only rate that will reproduce the proper sound track. The default rate is shown in the adjacent text field. You cannot edit this text field.

Specific Playback Speed

The **Set the Speed to Specific** option of the menu is used to set the playback speed to the rate specified in the adjacent text field. You can enter the speed as a floating point value (fractional).

Increase the Speed of Playback

You can click on this up arrow to increase the playback speed shown in the adjacent text field by 1 frame per second.

Decrease the Speed of Playback

You can click on this down-arrow to decrease the playback speed shown in the adjacent text field by 1 frame per second.

The Step Dialog Box

AviLxp allows you to specify the number of frames skipped between displayed frames during <u>playback</u> of the movie.



• Frame Increment

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The Frame Increment

The **Frame Increment** value is the number of frames skipped during playback when the <u>Skip Frames if Behind</u> option is not selected. For example, if the value is 3, then the frames played will be:

1,4,7,10,13,...

Increase the Number of Frames Skipped During Playback

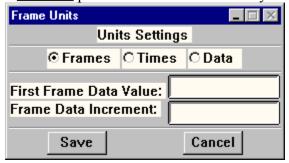
You can click on this up arrow to increase the Frame Increment shown in the adjacent text field by 1 frame

Decrease the Number of Frames Skipped During Playback

You can click on this down arrow to decrease the Frame Increment shown in the adjacent text field by 1 frame

The Units Dialog Box

AviLxp allows the user a choice of the the units used when annotating the frames, and when specifying a location in the movie. For example, the used and displayed values of the <u>selection</u> parameters are determined by the choices made in this menu:



The three choices of units available are:

- Frames Frames units.
- <u>Times</u> Movie timing units.
- <u>Data</u> Movie internal data units.

When you select the Data units, you must specify the <u>First Frame Data Value</u> and the <u>Frame Data Increment</u>.

Back to the Options Pulldown Menu. Back to the Table of Contents.

The Frame Option

The **Frames** option sets the type of units to <u>frames</u>. The first frame in the movie is number 1. The frame increment is 1.

The Time Option

The **Times** option sets the type of units to <u>Times</u>, the elapsed time from the start of the movie, as if the movie was played at the <u>Default</u> Speed..

The Data Option

The **Data** option of the menu sets the type of units to <u>Data</u>. This options is useful for animation of frames for which the playback speed is meaningless. For example an animation of several shots of a night sky full of star, taken at 1 minute interval, could be annotated with the actual time at which each shot was taken.

When you use this option you must specify the <u>First Frame Data Value</u> and the <u>Frame Data Increment</u>.

First Frame Data Value

The **First Frame Data Value** field is used to specify the <u>Data Value</u> of the First Frame of the movie.

Frame Increment Data Unit

The **Frame Data Increment** option of this menu is used to specify the <u>Data Value</u> of the increment between frames of the movie.

The Window Pulldown Menu

The Window Pulldown Menu allows you to configure attributes of the windows.

• Always on Top

Back to the Menu Bar Commands.
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The Always on Top Check Item

The movie window may be obscured by other windows. The **Window** menu gives the user control of such obstructions. If the <u>Always On Top</u> menu item is checked, the Front Panel and the <u>Projection</u> Window will always be on top: No other window will obscure the <u>Projection</u> Window.

Back to the Window Pulldown Menu. Back to the Table of Contents.

The Help Pulldown Menu

The AviLxp application provides help in several modes.

You can get Context Sensitive Help on any <u>Item</u> while you are in the application by simply pressing the **Right** mouse button over the Item. This will work even when an item is insensitive (grayed out).

If you wish to access Help in the standard Windows fashion, choose <u>contents</u>. This will provide a Hyper Text Table of Contents of the AviLxp Help file.

- Contents
- <u>How To Register</u> (Only available to unregistered users)
- About..

Back to the Menu Bar Commands. Back to the Table of Contents.

TheContents Command

This command allows you to access the Hyper Text Table of Contents of the AviLxp Help file

Back to the Help Pulldown Menu. Back to the Table of Contents.

The How To Register Command

The price for a single copy license is US \$ 25.00

You can register your evaluation copy of AviLxp in one of the following ways:

- Register by Email Our Preferred and Fastest way
- Register by Fax Our Second Preferred and Second Fastest way
- Register by regular Mail This is OK too

We will send you immediately the registration keys. Once you enter your registration keys, the program will start behave nicely!

- No more messages about unregistered or evaluation copy!
- You will not need to download a new version of AviLxp, unless you have a very old copy!!

Remember Remember Remember Remember Remember Remember

- Once you register: NO MORE DELAYS OR UNREGISTERED MESSAGES
- Once you register: YOU WILL RECEIVE FREE UPDATES FOR ALL OF 1996
- Once you register: YOU WILL BE A VERY NICE PERSON

Back to the Help Pulldown Menu. Back to the Table of Contents.

Registering by Email

Cut (i.e. copy to the clippoard with Edit/Copy) the following order form, then paste it in your Email message (or Body) and fill in the blanks. Send your Email message to **avi@scdm.com**

	Cut Here	
Please Send Key for Minnesota residents	r Cop(y)(ies) of AviLxp at \$25 each = s add applicable sale tax (6.5 %) + Total	
The Name you Are Re	egistering :	
You will receive a	separate key for each copy you order.	
Please bill my Cred	dit Card (circle one):	
Visa Master C	Card American Express	
Card Number:		
Expires:/_	/	
Name as on the Card	d:	
Name: _		
Company: _		
Email:		

Registering by Fax

TO: FAX NO: FROM: DATE:	Scientific CD Movies (612) 683-9311
Please S Minnesot	end Key for Cop(y)(ies) of AviLxp at \$25 each = a residents add applicable sale tax (6.5 %) + Total
The Name	you Are Registering :
You will	receive a separate key for each copy you order.
Please k	ill my Credit Card (circle one):
Visa	Master Card American Express
Card Num	ber:
Expires:	/
Name as	on the Card:
Please s	end Registration Keys by (circle one) :
Fax	Email Mail
	Name:
	Company:
	Address:
City, St	ate, Zip:
	Country:
Ι	ay Phone:
	Fax:
	Email:

Registering by regular Mail

Mail to:

Scientific CD Movies 12904 Hamplet Avenue Apple Valley, MN 55124 USA Attn: Bill Kamp Please Send Key for ___ Cop(y)(ies) of AviLxp at \$25 each = ____ Minnesota residents add applicable sale tax (6.5 %) + ____ Total ____ The Name you Are Registering: You will receive a separate key for each copy you order. Enclosed is my Check for US \$ _____ Or Please bill my Credit Card (circle one): Visa Master Card American Express Card Number: Expires: ___/___/___ Name as on the Card: Please send Registration Keys by (circle one) : Fax Email Mail Company: _____ City, State, Zip: Country: ____ Day Phone:

The About Dialog Box

This dialog box shows you information about the AviLxp application.

Back to the Help Pulldown Menu. Back to the Table of Contents.

Description of Trackbar

The <u>Trackbar</u> is used both to show the <u>Frame Location</u> and to move to a <u>Frame Location</u>.

The location of the <u>Track Arrow</u> in the **Trackbar** shows the relative location of the

The user may use the left mouse button to drag the <u>Track Arrow</u> to a new location thus changing the current frame.

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The Play in the Forward Direction Button



This is the Play Forward Button. When pressed, the movie will start playing in the forward direction.

The Play in the Reverse Direction Button



This is the Play Reverse Button. When pressed, the movie will start playing in the backward direction.

The Stop the Playback Button



This is the Stop <u>Playback</u> button. When pressed, the movie will stop playing at the currently shown frame.

The Rewind the Movie Button



This the Rewind Button. When pressed the movie will jump to the first frame or to the beginning of the <u>selection</u>.

If your <u>Selection</u> is a subset of the movie, and the <u>Current Frame</u> is within that <u>selection</u>, the **Rewind** button will move the <u>Current Frame</u> to the start of the <u>selection</u>. Pressing the button a second time will move the <u>Current Frame</u> to the first frame of the movie.

The Fast Forward a Movie Button



This the Fast Forward Button. When pressed the movie will jump to the last frame or to the end of the <u>selection</u>.

If your <u>Selection</u> is a subset of the movie, and the <u>Current Frame</u> is within that <u>selection</u>, the **Fast Forward** button will move the <u>Current Frame</u> to the end of the <u>selection</u>. Pressing the button a second time will move the <u>Current Frame</u> to the last frame of the movie.

The Start a Selection Button



AviLxp allows the user to select a subset of the movie for purposes of copying and playback. This button is used to set a specific frame as the start of your <u>selection</u>. You may enter the numerical value of the button to the right of the button.

How do I end a Selection?

Back to the Button Toolbar.

Back to the Table of Contents. For other options, See the Button Commands section.

Increase Selection Starting Point

You can click on this up arrow to increase the Selection Start by 1 frame.

Decrease the Selection Starting Point

You can click on this down arrow to decrease the Selection Start by 1 frame.

The End a Selection Button



AviLxp allows the user to select a subset of the movie for purposes of copying and playback. This button is used to set a specific frame as the end of your <u>selection</u>. You may enter the numerical value of the button to the right of the button.

How do I start a Selection?

Increase Selection Starting Point

You can click on this up arrow to increase the <u>Selection End</u> by 1 frame.

Decrease the Selection Ending Point

You can click on this down arrow to decrease the <u>Selection End</u> by 1 frame.

The Current Frame

The Current Frame number is shown in the visible on the screen. The units used are the <u>position</u> in the movie. Also, the Playback <u>Track</u> <u>Bar</u> will show you the approximate location of the Current Frame in the movie. For other options, See the <u>Button Commands</u> section.

The Go To a Specific Frame Button



This button, when pressed, will put the movie at the frame number listed to the right of the button.

For other options, See the <u>Button Commands</u> section.

Move Forward using Go To

You can click on this up arrow to increase the **Current Frame** by 1 frame.

Move Backward using Go To

You can click on this down arrow to decrease the <u>Current Frame</u> by 1 frame.

The Autofit or Zoom Control Button



You have two modes of controlling the vertical and horizontal scale used to display a movie frame.

• Button in the Up position, Autofit Mode

In this mode, the whole movie frame is fit in the window. If the frame size in pixels is larger than the <u>Projection</u> window, the resulting image will be under sampled. Some of the data pixels are not displayed, creating a 'poor looking' image.

If the frame size is smaller than the <u>Projection</u> window, the image will be over sampled, creating the effect of a Zoom.

When you resize the window, the program always switch automatically to Autofit mode.

Button in the Down position, Fixed Scale Mode

In this mode you control the scaling of the data. You can enter a magnification value (or Zoom factor) as a percentile in the text field adjacent to the button. A value of 100 means that one frame sample is mapped to one window pixel. If the frame is bigger than the window, you can use the scroll bars to pan over the image. In this case the data is cropped.

You can increase the Zoom factor to magnify the image. Then you can use the scroll bars to center the window over the area of interest.

You can improve playback speed by using a small <u>Projection</u> window and by cropping the data, while maintaining a zoom factor of 100. This, of course, wjill only show part of the frame.

Increase the Picture Size via Zoom

You can click on this up arrow to increase the Zoom factor by 10.

Decrease the Picture Size via Zoom

You can click on this down arrow to decrease the Zoom factor by 10.

How to Select a portion for playback

Select either the **Open Selection** or the

>>

<u>Close Selection</u> icons:



These actions will set the first and last frame to be used in the <u>selection</u>.

How to Set the Type of Playback

Select the the <u>Options/Play Mode</u> menu option. This will bring up a <u>menu</u> that will allow you to set the various options for playback.

NOTE: You have several options for entering speed, <u>selection</u> start and stop frames, and the zoom factor. In each case, the user can enter an arbitrary value, elect the <u>AVI</u> file default, or choose from a menu of choices.

How to Set the Speed of the Playback

Select the the Options/Speed menu option.

NOTE: You have several options for entering speed, <u>selection</u> start and stop frames, and the zoom factor. In each case, the user can enter an arbitrary value, elect the <u>AVI</u> file default, or choose from a menu of choices.

Glossary

- <u>AVI</u>
- Button Commands
- Crop
- <u>Data Units</u>
- Frame Number
- <u>Location</u>
- Position
- Popup
- <u>Selection</u>
- <u>Shareware</u>
- Time Units
- <u>Title Bar</u>
- <u>Toolbar</u>
- <u>Topic</u>
- Track Arrow
- TrackbarZoom

A software distribution method. Software is distributed for trial use, and if users find it useful, they are expected to pay a registration fee ('try before you buy').

The line of graphical push buttons that are located directly below AviLxp's Scroll and Menu bar. The Toolbar is used to control the movie.

The area at the top of the AviLxp program window that contains the program name, file name, system menu button and window size controls.

A block of text in a help file that will be displayed as a single display page.

The **Position** in the movie. The **Units**are those described in the **Units Menu**, i.e. **Frame**, **Time**, or **Data**.

This is the step settings pop up.

A small window that appears when you select a topic with a dotted underline. The window will remain until you click the left mouse button again.

AVI stands for Audio Visual Interface. It is a standard endorsed by Microsoft for the purpose of providing Audio Visual movies on a PC.

A Modeless (or non <u>Modal</u>) dialog is a dialog which **does not require** you to respond to it before you can proceed with other tasks. There is no good programming reasons to have <u>Modal</u> dialogs, except for unrecoverable errors and a poor programming environment.

A Modal dialog is a dialog which **requires** you to respond to it before you can proceed with other tasks. There is no good programming reasons to have Modal dialogs, except for unrecoverable errors and a poor programming environment.

You can position the cursor on the following Items and press the **Right** mouse button to get specific help:

- Any labels on the menu bar and on the related pulldown menus.

 Any labels in a dialog box.
- Any labels next to radio or check buttons
- Any Icon buttons
 The Track bar and Scroll bars

This is the window where the movies are shown.

The button commands are included below	the Track Bar, at the bottom of the control w	vindow.

The **Track Bar** is the middle section of the control window that looks like a scroll bar. The purpose of the bar is to indicate the location of the **Current Frame** of the movie.

The **Selection** is the subset of the movie that is used for **Playing** or **Copying**.

Playback is the process of playing the movie, providing the screen animation.

The **Frame Number** is the location within the movie of a specific frame. Frame 1 is the first frame of the movie. Frame 2 is the second Frame of the movie, etc.

The Frame Time is the location within the movie of a specific frame, using for reference the

time scale provided by AVI.

The **Frame Data** is the location within the movie of a specific frame. The units used are provided by the user at run time.

Crop is the term used to describe the conventions we use to fit a picture in a window. Only the portion of a **cropped** picture that fits in a window will be seen.

The Track Arrow is the arrow specific frame.	shaped bar in the i	middle Trackbar wii	ndow used to move to a

The Trackbar is the horizontal bar in the middle of the Control Window which is used to move to a specific frame.

The **Location** of a movie is the currently shown **Frame** in the **Units** chosen from the **Options/Units** menu.

The **Status Box** is the small arrow shaped, movable pointing mechanism used in the **Trackbar**.

Zoom is the term used to change the size of picture viewed.

Help for AviLxp

Occasionally a **Win95** user will be using **Win95** without the full **Multimedia** system. This happens when you see a window similar to:



Since our movies use a large number of the features of the **Win95 Multimedia**, you will need to complete the **Multimedia** installation.

First you need to get your Win95 CD or installation floppies.

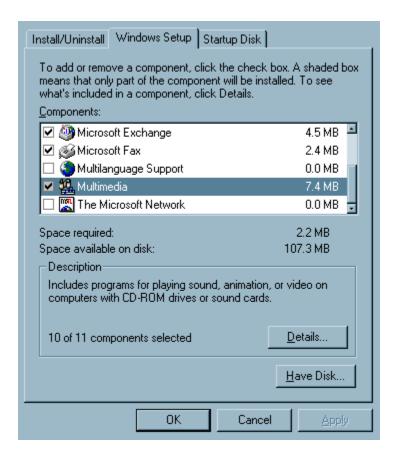
While holding down the shift key, insert your **Win95** CDRom, or your **Win95** setup floppy. (Holding down the shift key inhibits the CD's autostart.)

From the Start Button, select Settings, and Control Panel. In the control panel, you will see



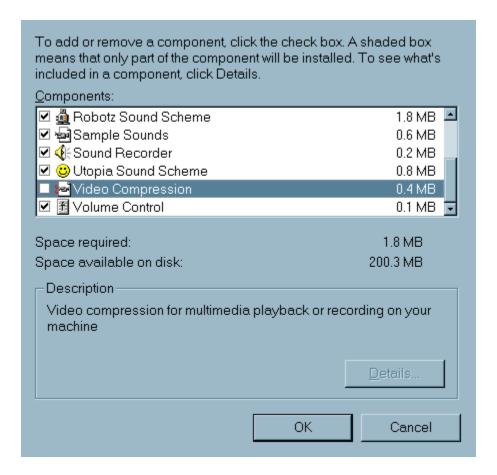
Click on this icon.

Next, click on the **Windows Setup** tab. Scroll down to the **Multimedia** section:



If the Multimedia check button is not selected, check it.

Next, double click on the **Multimedia** line. You will then see this:



Make sure the **Video Compression** selection check box is un-checked. (You may have to clear it.) Then press the **OK** button. This will complete the removal of the partially installed compression routines.

Next, set the check mark on the Video Compression section. Then press the **OK** button of the **Multimedia** window, and the **OK** button of the **Program Properties** Window. You have now completed adding the **Multimedia** compression routines. You should be able to play your movies.

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