

## VidCap Help Contents

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### Capturing Video

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## Introducing VidCap

VidCap is a data-capture application that lets you capture video sequences onto your computer system. With VidCap, you can capture individual images or entire video sequences from a VCR, a videodisc player, or a video camera and microphone. VidCap focuses on data collection; the VidEdit application, also included with Video for Windows, supports functions such as editing, compression, and formatting.

See Also

[VidCap Toolbar and Controls](#)

[Configuring VidCap](#)

## Capturing Video

Capturing one or more frames of an audio-video sequence involves setting up audio and video sources, supplying capture settings to VidCap, and performing the actual capture session. You'll first need to perform the following tasks:

- 1 Connect the audio and video sources to the capture board and audio board. For more information, see the documentation for your capture board.
- 2 Configure frame display and video source options for VidCap. For more information, see the topics beginning with Configuring VidCap.
- 3 Set up the capture file, and set options for the video sequence. For more information, see Setting Up for Video Capture.
- 4 Capture the video sequence. For more information, see Capturing Video.
- 5 Use the VidEdit application to edit the captured video sequence. You can use VidEdit to save the sequence in compressed format. For information about editing and compressing video, see Help for VidEdit.

### Capture Methods

VidCap provides two modes for capturing video sequences:

- Real-time capture
- Step-frame capture

Real-time capture processes a video sequence and audio as the events occur naturally, or as the video source plays without interruption. Step-frame capture pauses the video source as it collects each frame (image) of data, and, if audio is also selected, rewinds the media in the video source and collects audio data as the video source plays a second time.

#### Real-Time Capture

A video source for real-time capture (such as a video camera or videodisc) provides an uninterrupted stream of information to the capture hardware. The capture hardware copies each frame of the video sequence (and each portion of audio) and transfers it to disk before the next frame of data enters the capture hardware. A video frame contains one image of the video sequence.

Real-time capture demands a fast computer and hard disk. The computer must process and store the incoming video frame before the next frame is received in the capture board. If the system falls behind during capture, frames of video data are dropped (lost).

#### Step-Frame Capture

Step-frame capture collects video frames from a video sequence in a series of steps. In step-frame capture, frames are captured one at a time, generally from a paused video device. You can perform step-frame capture manually, advancing the video source using the controls on the video device. VidCap also provides automatic step-frame capture for video devices that support the Media Control Interface (MCI). With this method, VidCap issues frame-advance commands to the source device and captures the sequence frame-by-frame. When VidCap finishes capturing the current frame, it advances the video source to the next capture point.

Step-frame capture provides an alternative for systems that cannot process a video sequence in real time. Because the system can fully process a video frame before contending with the next, you can use larger frame sizes and color formats, and you can optionally compress the video sequence during capture. When a step-frame capture is complete, you can capture the audio segment associated with the video frames by playing the source video a second time.

See Also

[Setting Up for Video Capture](#)

[About the Capture Process](#)



## Tips for Improving Video Quality

In addition to mastering the basics of capturing, editing, and compressing video, you should know how to adjust the physical elements of the recording set to improve the recording quality your digital-video clips. The following sections provide tips for improving the quality of your videos. You should consider the following areas:

- Lighting
- Video-source quality
- Audio-source quality
- Recording distortion
- Compression Considerations

### Using Lighting Effectively

While many cameras can be adjusted for low-light conditions, a well-lit scene vastly improves video quality. Improved lighting makes colors richer; details appear clearer. Also, many computer monitors cannot display subtle differences in low-light scenes, especially when compared to TV or video monitors.

Although shadows play an important role in traditional film-lighting schemes, they can greatly increase the storage and data-transfer requirements for digital movies. Shadows increase the number of color variations from frame to frame, thus increasing the amount of data needed to represent each frame. To reduce color variations (thereby improving playback performance), you can use a flat lighting scheme that illuminates the subject from all sides, eliminating shadows.

### Improving the Quality of the Video Source

Use high-quality video formats such as Hi-8, and always use a master or first-generation tape. Subsequent generations increase background noise, which not only affects playback quality, but results in lower compression ratios. Remove all sources of noise from your video by cleaning the playback head on your VCR, by connecting your computer, VCR, and camera to a common ground, and by using shielded cables.

### Improving Audio Quality

Check the level of the your audio using the Level button in the Audio Format dialog box. You should adjust the audio level so that the loudest audio passages are about 80% of the full range. Also, you should make all of your recordings at a consistent audio level.

### Retaining Detail in the Video Sequence

All forms of digital recording are subject to distortion known as aliasing. In digital video, this distortion appears as moire patterns, or other visual effects. Aliasing happens when the sampling rate is insufficient to capture all the data coming in from the analog-video source.

Capturing video images at 320-by-240 or 160-by-120 resolution can result in the loss of fine detail within the video image. For example, at 160-by-120 resolution, only every fourth line of an incoming video signal is retained. Thin lines in the image (for example, telephone poles) can be dropped entirely.

Some video-capture hardware uses low-pass filters to reduce aliasing as the size of the capture window is reduced. If your video-capture hardware does not include anti-aliasing filters, try the following:

- ▶ Use the 2x Spatial averaging technique provided by VidCap. You can use this technique when capturing from video-source devices that support the Media Control Interface (MCI). For more information, see Controlling the Video Source During Automatic Capture.
- ▶ When recording finely detailed objects, zoom-in as close as possible.
- ▶ Avoid using materials in your video sequences that contain patterns; for example, venetian blinds, tiles, checker boards, and plaids.

### Reducing Color Distortion

When capturing using the 8-bit video format, which uses a 256-color palette, you might experience



flickering caused by color variations produced by the analog-to-digital conversion. These variations aren't as apparent in the 16- or 24-bit formats. To reduce flickering when capturing 8-bit sequences, you can use a VidCap averaging technique available when capturing frames from an MCI-supported source device. For more information, see [Controlling the Video Source During Automatic Capture](#).

### **Compression Considerations**

By recording clips that compress well, you can create smaller compressed files, as well as reduce the load on system resources during playback. Use the following guidelines to improve compression:

- ▶ Minimize the amount of the image that changes between frames.  
A static landscape clip produces great compression ratios. Panning or zooming the camera while recording decreases the compression ratio.
- ▶ Use broad areas of constant color, which compress better than fine-grained detail.  
When using backdrops, select solid colors rather than textured areas.

See Also

*Getting Started with Video for Windows*



## VidCap Toolbar and Controls

Click the controls in the following illustration for an explanation of the VidEdit control:



See Also

[Configuring VidCap](#)

[Adjusting the Look of VidCap](#)



## File Menu Commands

The File menu contains the following commands:

Command	Description
Load Palette	Imports an 8-bit color <u>palette</u> for use in the video sequence. You can load a palette from a <u>bitmap</u> (.DIB or .BMP) file or palette (.PAL) file. The palette you load replaces the default gray-scale palette provided by VidCap.
Set <u>Capture File</u>	Identifies and creates the file that stores captured video sequences.
Save Captured Video As	Copies the contents of the current <u>capture file</u> to another file.
Save Palette	Saves the palette of the current capture file as a palette (.PAL) file.
Save Single Frame	Saves the current <u>frame</u> as a bitmap (.DIB) file.
Edit Captured Video	Starts VidEdit, the editing application, and loads the current video sequence.
Exit	Exits VidCap.

See Also

[Saving Video Files](#)

[Preparing the Capture File](#)

[Setting the Palette](#)



## Edit Menu Commands

The Edit menu contains the following commands:

Command	Description
Copy	Copies the current <u>frame</u> image, including the <u>palette</u> , to the Clipboard.
Paste Palette	Pastes a palette from the Clipboard into VidCap. VidCap uses this palette when setting colors for a captured image or video sequence that uses the 8-bit color format.
Preferences	Lets you customize VidCap display settings (these settings have no effect on the video sequence).

See Also

[Setting the Palette](#)

[Adjusting the Look of VidCap](#)





## Options Menu Commands

The Options menu contains the following commands:

Command	Description
Audio Format	Sets characteristics for the audio track of the video sequence.
Video Format	Sets the dimensions and color format of captured images.
Video Source	Sets the type of input signal supplied by the video source.
Video Display	Sets the source for the video monitor or, for capture hardware with <u>overlay</u> capability, sets the display characteristics of the video overlay.
Video Compression	Sets software <u>compression</u> routines to use during the capture session (generally used only with <u>frame-by-frame capture</u> ).
Preview Video	Sets the VidCap display area to display an image stored in the <u>frame buffer</u> .
Overlay Video	Sets the VidCap display area to display the video-input signal.

See Also

[Setting Audio Options](#)

[Setting Video Options](#)

[Setting the Video Source](#)

[Setting Video Display Options](#)

[VidCap Toolbar and Controls](#)



## Capture Menu Commands

The Capture menu contains the following commands:

Command	Description
Single Frame	Captures the current <u>frame</u> from the video board and displays it in the frame area.
Frames	Manually captures video frames from the source to a <u>capture file</u> . You indicate each frame you want to capture as it appears in the display area.
Video	Automatically captures a sequence of frames, at a specified frame rate, to a capture file. This command controls video capturing in <u>real time</u> . It also provides <u>step-frame</u> capturing and software control of the video source (if a software driver used to control the video source is available).
Palette	Captures color information from the incoming video stream. Using this command, you can build a color <u>palette</u> from specific images in a video stream (by manually specifying the images) or from a series of frames captured automatically by VidCap.

See Also

[Setting Up for Video Capture](#)

[Capturing a Video Sequence Manually](#)

[Capturing a Video Sequence Automatically](#)

[Controlling the Video Source During Automatic Capture](#)

[Setting the Palette](#)



## Help Menu Commands

The Help menu contains the following commands:

Command	Description
Contents	Displays the Contents topic of this Help file.
About	Displays the version number and copyright statement for VidCap.

See Also

Press F1 for information on using Help.



## Overview: Configuring VidCap

Each capture board has unique controls and options. VidCap can display customized video-source settings for your capture board, so you can configure the application to take full advantage of the features of the capture board. You can also adjust the appearance of the VidCap window by selecting options in the VidCap Preferences dialog box. The following topics describe how to configure VidCap.

See Also

[VidCap Toolbar and Controls](#)

[Setting Up for Video Capture](#)



## Adjusting the Look of VidCap

There are several ways to customize the appearance and contents of the VidCap window. These settings are available from the VidCap Preferences dialog box.

### ▶ **To set editing preferences**

- 1 From the Edit menu, choose Preferences.
- 2 Select the visual preferences you want. For information about the preferences, see [VidCap Preferences Dialog Box](#).
- 3 Choose OK.

See Also

[VidCap Preferences Dialog Box](#)

[Setting the Video Source](#)

[Setting Video Display Options](#)



## ▶ **Setting the Video Source**

Some capture boards can process several types of video signals. Depending on the capabilities of the capture board, VidCap might provide any of the following options for specifying the video source:

- ▶ Source format (for example, RGB, composite, or SVideo)
- ▶ Video standards (NTSC, PAL, or SECAM)
- ▶ Hue, saturation, and contrast levels

These options vary among different capture boards. You should consult the documentation for your capture board.

### ▶ **To set the video-source type and component levels**

- 1 From the Options menu, choose Video Source.
- 2 Select the appropriate video-source options. For more information about the options, see [Video Source Dialog Box](#).
- 3 Choose OK.

See Also

[Video Source Dialog Box](#)

[Setting Video Display Options](#)

## ▶ Setting Video Display Options

VidCap can display one of the following images in its window:

- ▶ The incoming video signal (before capture)
- ▶ A preview of the captured video frames (after capture)

To display the incoming video signal in the VidCap window, you need a capture board that supports video overlay. You can view the video-overlay signal to find the frames you want to include in the sequence. However, to view the captured frames, you must preview the captured video sequence.

If your capture board lacks overlay capability, you might be able to display the video signal or the captured frames on a secondary display monitor connected to the output port of the capture board.


**Note** During video capture, VidCap places highest priority on maintaining the flow of data from the capture board to the capture file. Because displaying captured frames requires some processing resources, VidCap might not be able to update the display area during capture. (This is not a problem when displaying the incoming video signal using an overlay board.)

### Video Display Options for Overlay Boards

When displaying the incoming video signal, you can adjust the colors, contrast, and saturation of the signal to improve the picture quality in the VidCap display area. These settings don't affect the quality or color of images captured; they just adjust the look of the display area.

#### ▶ To display captured frames in the VidCap display area

- ▶ From the Options menu, choose Preview Video.

Or, from the toolbar, choose the Preview Video button .

#### ▶ To display the video-overlay signal in the VidCap display area

- ▶ From the Options menu, choose Overlay Video.

Or, from the toolbar, choose the Overlay Video button ▶.

#### ▶ To adjust the picture quality of an overlay display

- 1 From the Options menu, choose Video Display.
- 2 Adjust the video-overlay signal characteristics as needed. For information about the options, see Video Display Dialog Box.
- 3 Choose OK.

### Video Display Options for Non-Overlay Boards

With non-overlay boards, VidCap always displays the captured video frames in the display area. You might be able to connect a second monitor to the output port of the capture board and use this monitor to display either the incoming video signal or the captured video frames.

#### ▶ To select what to display on the output monitor

- 1 From the Options menu, choose Video Display.
- 2 Choose the appropriate signal source for the output monitor.
  - To display captured frames (the contents of the frame buffer on the capture card), select Frame Buffer Image.
  - To display the incoming video signal (from which the capture hardware builds video frames), select Video Input Signal.
- 3 Choose OK.

See Also

[VidCap Toolbar and Controls](#)

[Video Display Dialog Box](#)

[Setting the Video Source](#)



## Overview: Setting Up for Video Capture

Before capturing video, you must perform the following tasks:



### Create a capture file

VidCap captures video and audio data to a capture file, which is created on your hard disk before the capture session starts. By pre-allocating a capture file, you assure sufficient space for storing incoming video and audio data.



### Select option settings for the video sequence

Your video-capture system can handle various color settings, frame sizes, and audio formats. Some capture boards offer hardware-based assistance for compressing a video stream during capture. VidCap lets you take full advantage of all the performance capabilities of your capture hardware. You can adjust these settings for different video sequences, achieving the desired balance between quality, storage requirements, and data-transfer rates.



### Create a capture palette (assuming you're using the 8-bit color format)

You'll want to create optimal palettes for video sequences being played on 8-bit (256-color) systems. VidCap lets you create representative palettes by sampling colors appearing in one or more frames of the video source signal; you can apply these palettes during the capture process, or you can save them and apply them later using the editing application, VidEdit.



### Test the setup

Once you've finished configuring your capture settings, you can test the setup by capturing a few test frames. Capturing and compressing video can be a time-consuming process, so it's a good idea to carefully adjust your settings up front, before you capture a lengthy sequence.

You won't have to perform all these tasks every time you capture video; most can be performed once, the first time you capture video. Later, you can adjust the settings as needed to achieve the desired playback performance. The following topics in this sequence discuss the various setup tasks.

See Also

[Configuring VidCap](#)

[About the Capture Process](#)




## Preparing the Capture File

Before capturing video sequences, you must identify a capture file. The capture file sets aside an area of your hard disk to receive captured video and audio data. By ensuring that the capture file exists in a contiguous area on your hard disk, you can allow the highest possible disk-write speeds and reduce the chances of losing data due to disk seeks.

When creating a capture file, specify a size large enough to hold the entire video sequence. If you run out of room while capturing, VidCap will attempt to enlarge the file to hold the captured data. However, enlarging a capture file might cause the file to become fragmented and might also cause one or more frames to be dropped.

**Hint** You can use a capture file multiple times; when you finish capturing video, just save the video sequence to a different filename. You can also set aside multiple capture files.

### ▶ To set the capture file

- 1 From the File menu, choose Set Capture File.  
Or, choose the Set Capture File button .
- 2 Type a filename for the capture file.
- 3 To specify the size of a new capture file, or to change the size of an existing file, choose the New Size button, type a size in megabytes, and choose OK.
- 4 From the Set Capture File dialog box, choose OK.

## Defragmenting the Capture File

After allocating a capture file, you should use a disk-defragmentation utility to defragment the hard disk on which the capture file is stored. If the capture file does not reside in contiguous sectors of your hard disk, your system will be forced to perform a disk seek during the capture session, which might result in dropped video or audio data.

To defragment the hard disk, you can use a disk defragmentation application, such as the Defrag utility included with MS-DOS version 6.0.

## Example of Capture-File Size

The following sample-video sequence would require approximately 23 megabytes of disk space:

Attribute	Value
Length	1 minute
Compression	None
Color format	8 bits per pixel (using a palette)
Frame size	160-by-120 pixels
Frame rate	15 frames per second
Audio format	8-bit samples, mono, 11.025 kHz sampling rate

See Also

[Set Capture File Dialog Box](#)

[Saving Video Files](#)



## Setting Audio Options

Audio options determine the quality and storage requirements of the audio for your video sequence. Higher-quality audio takes more storage space, so you'll have to decide on an appropriate mixture of settings.

Audio formats range from the equivalent of a voice-grade telephone line (8-bit samples, mono channel, and 11.025 kHz frequency) to audio-CD quality (16-bit samples, stereo channels, and 44.100 kHz frequency). To capture audio with the video, you must have the audio sources connected to the audio-input ports on your audio card.

**Hint** If you work with multiple input sources, use a mixing board to select among the sources.

### ▶ To set the audio-data track format and sample rate

- 1 From the Options menu, choose Audio Setup.
- 2 Select the appropriate audio options. For information about the settings, see Audio Format Dialog Box.
- 3 Choose OK.

### ▶ To set the maximum recording level of the audio input

- 1 From the Audio Format dialog box, choose the Level button.
- 2 While observing the volume bar, adjust the audio source so the volume peaks at about 80% of the full range shown on the volume bar.
- 3 Choose OK.



See Also

[Audio Format Dialog Box](#)

[Set Record Level Dialog Box](#)



## Setting Video Options

You can choose the frame size and color format for the video sequence. Larger frame sizes provide greater impact but require more storage space. Video sequences can use an 8-bit color format with palette; this format plays on the widest variety of video displays and requires the least storage space. You can also use 16- or 24-bit formats that preserve the original colors, but might also require three times the storage space.

The specific video-format options depend on the capabilities of the capture board. In addition to the frame-size and color-format options, some capture boards offer hardware-based compression routines that you select while choosing video options.

### ▶ To set the video options

- 1 From the Options menu, choose Video Format.
- 2 Select the appropriate size and color-format options. For information about the options, see Video Format Dialog Box.
- 3 Choose OK.

See Also

[Video Format Dialog Box](#)

[Setting Compression Options](#)

[Setting the Palette](#)



## Setting Compression Options

You might be able to use software-based compression routines to compress the audio and video data during the actual capture session. When performing a step-frame capture (one frame at a time), your system has enough time to compress the current frame before processing the incoming data for the next frame. However, it's unlikely that your system will be able to perform software compression during a real-time capture, when the video source is playing at normal speed.

The specific compression routines provided by VidCap depend on the capabilities of the capture board and on the compressors installed on your system.

**Note** If your capture boards supports hardware-based compression schemes that can be used during capture, select those schemes from the Video Format dialog box. For information about selecting video-format options, see Setting Video Options.

### ▶ To set compression options

- 1 From the Options menu, choose Video Compression.
- 2 Select the compression options. For information about the options, see Video Compression Dialog Box.
- 3 Choose OK.

See Also

[Video Compression Dialog Box](#)

[Setting Video Options](#)



## Setting the Palette

Two main color models are available for video sequences:

- ▶ An 8-bit color model that's compatible with the majority of video adapters. With 8-bit color, all the colors for a video frame are stored in a palette, a table of color values. Individual pixels within the video frame reference the entries in the table. An 8-bit palette can contain a maximum of 256 color entries, so you're limited to 256 colors per video frame. A video sequence can have multiple palettes, but switching from one palette to the next can cause undesirable color effects during playback.
- ▶ 16- or 24-bit color models that preserve more of the original colors from the video signal but require at least two to three times more storage space. A 16- or 24-bit video sequence will show significant color changes when played back on common 8-bit video adapters.

When capturing video using the 8-bit (palette) format, VidCap uses a single palette for all video frames. Some capture drivers provide a 64-shade gray-scale palette, but you can supply a custom color palette compatible with the colors used in the video signal.

### Applying an 8-Bit Palette to a Video Sequence

There are two ways to supply a palette for use in a video sequence:

- ▶ Load a palette from a palette (.PAL) file. For example, you might create a standard palette for use in several video sequences; you can save this palette as a .PAL file and then use it whenever you capture video.
- ▶ Use VidCap to create a palette from one or more frames of the video sequence. This approach lets you build a custom palette using the most-common colors in the video sequence. Once you create a palette from the video sequence, you can save it for later use with other sequences.

Be sure to experiment with different palettes before finalizing your video sequences. The right palette can dramatically improve the quality of your video sequence.

**Hint** If your capture board supports the 16-bit or 24-bit formats, you can capture in these "true-color" formats. You can then load the "true-color" version into VidEdit and experiment with various 8-bit palettes.

#### ▶ To build a palette from one or more frames

- 1 From the Capture menu, choose Palette.
- 2 Type the number of colors you want for the palette. You can type the following values:

Value	Description
1 through 236	Builds a palette with the specified number of entries. Larger numbers of entries provide more color choices, while smaller values can result in substantial reductions in file sizes after compression.
256	Builds an <u>identity palette</u> , with 236 colors defined from the incoming video signal, and 20 system-defined colors. Identity palettes provide more efficient processing during playback.

- 3 Choose from the following actions:

To	Do This
Capture colors from a single frame	Choose the Frame button each time you want to capture colors from an image.
Start capturing colors from multiple frames	Choose the Start button to start capturing.

If the palette is for a video sequence, include several frames of data in the sequence from which you build your palette. By capturing colors from several frames, you provide a better representation of

colors for the video sequence.

- 4 Choose the Close button.

There will be a slight delay while VidCap creates an optimal palette from the captured frames.

► **To save a palette**

- 1 From the File menu, choose Save Palette.
- 2 Select the filename for the palette (.PAL) file.
- 3 Choose OK.

**Note** If you haven't created a palette from the video sequence (as described in the preceding procedure), the video-capture driver will supply a default palette. This palette might be a color or grayscale palette, depending on the capabilities of the capture driver.

► **To load a palette from an external file**

- 1 From the File menu, choose Load Palette.
- 2 Select a palette (.PAL) file.
- 3 Choose OK.

There is a short delay while VidCap loads the new palette.

See Also

[Capture Palette Dialog Box](#)

[Load Palette Dialog Box](#)

[Setting Video Options](#)

[Saving Video Files](#)





## Testing the Setup

After configuring your video-capture settings, you can capture a single frame and display it in the VidCap display area. If your capture board has overlay capabilities, be sure to set the VidCap frame display to show the capture preview rather than the overlay (from the Options menu, choose Preview Video).

If you're using the 8-bit (palette) color format, you should also determine whether your color palette is compatible with other images you plan to display in your presentation. Systems with 8-bit video adapters can display a maximum of 256 colors simultaneously. If two video sequences (or a video sequence and an image) use completely different colors, the system will be unable to display correct colors for both images simultaneously.

To test your palettes, display the video sequences together simultaneously (you can run multiple copies of VidEdit and display one sequence in each). The video sequence in the active application will have priority for palette entries, so examine the inactive video sequence to see if any color changes occur. Whenever you display multiple images together on an 8-bit video display, it's a good idea to build composite palettes that contain the necessary color entries for all the images. Using composite palettes can prevent unexpected color changes during your presentation.

See Also  
[Setting the Palette](#)



## About the Capture Process

You can capture video sequences manually or automatically using VidCap. In either case, the captured video and audio data is stored in a pre-allocated capture file on your hard disk. Before starting video capture, you should create a capture file and set all the necessary options for the video sequence; for an overview of this process, see Setting Up for Video Capture.

You should consider the following techniques for capturing video:

- ▶ Manual (step-frame) capture: With manual capture, you advance the source device frame-by-frame to display the necessary video images. Whenever a desired image is displayed, you capture the frame. This is a useful technique for capturing individual still images from a video source.
- ▶ Automatic capture: With automatic capture, you capture a stream of video played at normal speed from the source device. During automatic capture, VidCap captures frames at the specified frame rate, storing the data in the capture file. Automatic capture can place high demands on your system because the hard disk needs to keep up with the incoming video and audio data. Be sure to use a fast computer with a fast hard disk, and prepare a defragmented capture file before beginning the capture process.
- ▶ Automatic capture, with Vidcap controlling the source device: If your source device (videodisc player or videocassette recorder) includes a Media Control Interface (MCI) device for controlling playback, VidCap can issue commands to position and play the device during the capture session. On videodisc players, you can also perform a step-frame capture, in which frames are advanced and captured at low speed, allowing a larger frame size and color format.

These techniques are all discussed in the following topics in this sequence.

See Also

[Setting Up for Video Capture](#)

[Tips for Improving Video Quality](#)



## Capturing a Video Sequence Manually

You can capture a video sequence manually, one frame at a time. Frames are captured to the file you specified (for information about specifying a capture file, see Preparing the Capture File). After capturing a series of frames, you can save the video sequence to a different filename.

### ▶ To capture frames manually

- 1 From the Capture menu, choose Capture Frames.
- 2 Start the video-source device.
- 3 Each time the first frame you want to capture is displayed on the output monitor, choose the Capture button on the Capture Frames dialog box.
- 4 When you finish capturing frames, choose the Close button, or press the ESC key.

See Also

[Capture Frames Dialog Box](#)

[Preparing the Capture File](#)

[Saving Video Files](#)

## ▶ Capturing a Video Sequence Automatically

You can capture a series of frames automatically. In an automatic capture, you specify the attributes of the video sequence and then capture the sequence to the capture file (for information about specifying a capture file, see Preparing the Capture File). After capturing a series of frames, you can save the video sequence to a different filename.

When capturing video, you can control your video source in the following ways:

- ▶ Manually (using the controls on the camera, videodisc player, or videocassette recorder).
- ▶ Automatically, using a Media Control Interface (MCI) driver. With MCI control, you can specify the starting and ending points for the playback, and VidCap plays the specified segment automatically when you start capturing. For more information about MCI control, see Controlling the Video Source During Automatic Capture.

With either method, you begin by specifying a series of attributes for the video sequence. You then start the capture. You can capture for a preset period of time (for example, capture 3 minutes of video), or you can stop capture by pressing the ESC key.

**Note** During capture, your hard disk might not keep up with the frame rate you specified. If this occurs, VidCap inserts blank frames where it is unable to store frame data. When the capture session is complete, VidCap reports the number of blank or dropped frames. Dropped frames use minimal storage space (8 bytes) and do not adversely affect audio/video synchronization.

### ▶ To capture a series of frames automatically

- 1 From the Capture menu, choose Video.
- 2 Select the recording options you want for the capture session.

For information about capture options, see Capture Video Sequence Dialog Box.

For information about the audio-recording format (available from the Audio button), see Audio Format Dialog Box.

For information about the video-recording format (available from the Video button), see Video Format Dialog Box.

For information about settings for controlling the video source using MCI, see MCI Settings Dialog Box.

- 3 If you're manually controlling your source device, start your source device.
  - 4 To start capturing frames, choose OK.
  - 5 To end capture, press the ESC key.
- During the capture session, VidCap reports capture information in the status bar.

See Also

[Capture Video Sequence Dialog Box](#)

[Audio Format Dialog Box](#)

[Video Source Dialog Box](#)

[MCI Settings Dialog Box](#)

[Preparing the Capture File](#)

[Setting Audio Options](#)

[Setting Video Options](#)

[Controlling the Video Source During Automatic Capture](#)

[Saving Video Files](#)



## ▶ Controlling the Video Source During Automatic Capture

If your videodisc player or videocassette recorder has a Media Control Interface (MCI) driver for controlling playback, you can have VidCap control the video-source device during the capture operation. MCI drivers are available for several videodisc players and for Sony Visca-compatible videotape recorders (such as the CVD-1000 VDeck). Contact the manufacturer of your videodisc or videocassette player to see whether there's an MCI driver available.

Using MCI control, you can specify the starting and ending points of the segment to capture. VidCap can automatically start playback at the desired position, capture the specified video segment, and then stop capturing at the end location.

On videodisc players, you can also perform a step-frame capture, in which VidCap single-steps the player from frame to frame, capturing each frame at low speed. Step-frame capture can allow larger frame sizes and video formats (such as 24-bit color) than might otherwise be possible using a real-time capture.

### ▶ To set an MCI-compatible video source for an automatic capture session

- 1 From the Capture menu, choose Video.
- 2 Select the appropriate options in the Capture Video Sequence dialog box.
- 3 Select MCI Control Of Source Video.  
The MCI Settings dialog box appears.
- 4 Select the options you want.
- 5 Choose OK.
- 6 From the Capture Video Sequence dialog box, choose OK. VidCap positions the device and starts the capture session.

**Note** If the MCI control of the source-video option is unavailable, you must install an MCI device driver for your video source. Use the Drivers application from the Control Panel to install the MCI device driver.

See Also

[Capture Video Sequence Dialog Box](#)

[MCI Settings Dialog Box](#)



## Saving Video Files

You can save the captured video data in the following formats:

- ▶ You can save the capture file to a different .AVI filename. This lets you use the capture file to store a new video sequence.
- ▶ You can save the currently captured frame as a bitmap (.DIB) file. You can also copy the bitmap to the Clipboard.
- ▶ You can save the palette as a palette (.PAL) file. If you create a palette for a video sequence, VidCap will save that palette; otherwise, it saves a default palette provided by the capture-board driver.

### ▶ To save captured video data

- 1 From the File menu, choose one of the following commands, depending on what type of file you want to save:

<u>File Type</u>	<u>Command</u>
Video sequence (.AVI) file	Save As
Bitmap (.DIB) file	Save Single Frame
Palette (.PAL) file	Save Palette

- 2 Type the filename.
- 3 Choose OK.

See Also

[Capturing a Video Sequence Manually](#)

[Capturing a Video Sequence Automatically](#)

[Setting the Palette](#)

## Load Palette Dialog Box

Use this dialog box to load an 8-bit color palette from a palette (.PAL) file. The palette will be used for the entire video sequence. For information about using color palettes in a video sequence, see Setting the Palette.

The dialog box has the following options:

Option	Description
File Name	Identifies the currently selected file. To specify another file, select another filename from the list beneath the box, or type another filename.
Directories	Specifies the directory path that contains the current file. To specify another directory, select another directory from the list beneath the box, or type another directory path in the File Name box.
List Files Of Type	Specifies the type of file that you want to use. To specify another type of file, select another entry from the list beneath the box.
Drives	Specifies the device that contains the current file. To specify another device, select another device from the list beneath the box, or type another device name in the File Name box.
OK	Opens the specified palette file.
Cancel	Closes the dialog box without opening a palette file.

See Also  
[Setting the Palette](#)

## Set Capture File Dialog Box

Use this dialog box to specify a file to store the captured video and audio data. By creating the capture file before the capture session, you allocate space on your hard disk for the audio and video data, which comes in at high speed from the capture board. For more information about capture files, see Preparing the Capture File.

The dialog box has the following options:

Option	Description
File Name	Identifies the currently selected file. To specify another file, select another filename from the list beneath the box, or type another filename.
Directories	Specifies the directory path that contains the current file. To specify another directory, select another directory from the list beneath the box, or type another directory path in the File Name box.
List Files Of Type	Specifies the type of file that you want to use. To specify another type of file, select another entry from the list beneath the box.
Drives	Specifies the device that contains the current file. To specify another device, select another device from the list beneath the box, or type another device name in the File Name box.
New Size button	Displays the <u>Set File Size dialog box</u> for changing the size of the capture file.
OK	Sets the capture file to the specified filename.
Cancel	Closes the dialog box without setting a capture file.

See Also

[Preparing the Capture File](#)

[Set File Size Dialog Box](#)



## Set File Size Dialog Box

Use this dialog box to change the size of a capture file. The dialog box shows the amount of disk space available on the drive, as well as the current size of the capture file. To change the size of the capture file, type a new value (in megabytes) in the File Size box. Choose OK to change the size; choose Cancel to keep the current size.

See Also

[Preparing the Capture File](#)

[Set Capture File Dialog Box](#)

## Save Captured Video As Dialog Box

Use this dialog box to save the video sequence to a different filename from the capture file. The dialog box has the following options:

Option	Description
File Name	Identifies the currently selected file. To specify another file, select another filename from the list beneath the box, or type another filename.
Directories	Specifies the directory path that contains the current file. To specify another directory, select another directory from the list beneath the box, or type another directory path in the File Name box.
List Files Of Type	Specifies the type of file that you want to use. To specify another type of file, select another entry from the list beneath the box.
Drives	Specifies the device that contains the current file. To specify another device, select another device from the list beneath the box, or type another device name in the File Name box.
OK	Saves the captured video sequence to the specified filename.
Cancel	Closes the dialog box without saving the video sequence.

See Also

[Saving Video Files](#)

[Preparing the Capture File](#)

## Save Palette Dialog Box

VidCap can create an 8-bit palette using the colors in the video sequence, and you can save it in a palette (.PAL) file. The palette is provided by the capture-board driver and might also be a fixed color or gray-scale palette.

The dialog box has the following options:

Option	Description
File Name	Identifies the currently selected file. To specify another file, select another filename from the list beneath the box, or type another filename.
Directories	Specifies the directory path that contains the current file. To specify another directory, select another directory from the list beneath the box, or type another directory path in the File Name box.
List Files Of Type	Specifies the type of file that you want to use. To specify another type of file, select another entry from the list beneath the box.
Drives	Specifies the device that contains the current file. To specify another device, select another device from the list beneath the box, or type another device name in the File Name box.
OK	Saves the current palette to the specified .PAL file.
Cancel	Closes the dialog box without saving the palette.

See Also

[Setting the Palette](#)

[Saving Video Files](#)

## Save Single Frame Dialog Box

Use this dialog box to save the current frame as a bitmap (.DIB) file.

The dialog box has the following options:

Option	Description
File Name	Identifies the currently selected file. To specify another file, select another filename from the list beneath the box, or type another filename.
Directories	Specifies the directory path that contains the current file. To specify another directory, select another directory from the list beneath the box, or type another directory path in the File Name box.
List Files Of Type	Specifies the type of file that you want to use. To specify another type of file, select another entry from the list beneath the box.
Drives	Specifies the device that contains the current file. To specify another device, select another device from the list beneath the box, or type another device name in the File Name box.
OK	Saves the current frame to the specified filename.
Cancel	Closes the dialog box without saving the frame.

See Also

[Saving Video Files](#)



## VidCap Preferences Dialog Box

This dialog box lets you configure the appearance of VidCap. It has the following fields:

<b>Option</b>	<b>Description</b>
Status Bar	Specifies whether to display the status bar at the bottom of the VidCap window.
Tool Bar	Specifies whether to display the VidCap toolbar.
Center Image In Window	Specifies whether to display the frame image in the center of the window. If the option is cleared, the frame is displayed in the upper-left corner.
Background Color	Specifies which color to use for the background of the VidCap window.
Maximum Number Of Frames	Specifies one of two settings for the largest video sequence you plan to capture. To capture sequences longer than 32,000 frames, select the 324,000 setting.
OK	Saves the preference settings.
Cancel	Closes the dialog box without saving the preference settings.

See Also

[VidCap Toolbar and Controls](#)

[Configuring VidCap](#)

[Adjusting the Look of VidCap](#)

## Initialization Error Dialog Box

This dialog box is displayed when VidCap fails to initialize your video-capture hardware. The message implies one or more of the following conditions:

- ▶ The capture hardware is not installed.
- ▶ The capture hardware has incorrect jumper or switch settings, or the settings conflict with settings of other installed devices.
- ▶ The driver for the capture hardware is not installed.
- ▶ Settings for capture driver conflict with settings of other devices, or do not match the settings of your capture hardware.

Exit VidCap and verify the installation of the video-capture hardware and the capture driver. For information about installing video capture hardware and related software, see the documentation for your capture board, as well as the *Video for Windows User's Guide*.

**Hint** To determine the interrupt settings and I/O ports used on your system, you can run the Microsoft Diagnostics (MSD.EXE) application. This application (run from the MS-DOS prompt) lets you view hardware settings on your PC. This information can be valuable when configuring a video-capture board.

See Also

Documentation for your capture board

*Getting Started with Video for Windows*

## Audio Format Dialog Box

The Audio Format dialog box lets you select the following audio settings, which determine the quality and storage requirements for the audio track:

Option	Description
<u>Sample Size</u>	Defines the amount of storage used for each digitized portion of the waveform. 8-bit samples use less memory to store waveform information; 16-bit samples provide greater dynamic range.
Channels	Specifies how many audio channels to use. <u>Mono</u> waveforms store audio information in a single audio track. <u>Stereo</u> waveforms use two tracks to store waveform information and double the amount of audio information per <u>frame</u> .
<u>Frequency</u>	Defines the rate at which audio samples are taken. The 11.025 kHz frequency (roughly equivalent to a voice-grade telephone line) samples over 11,000 samples per second.  The 22.05 kHz frequency (equivalent in quality to AM radio) obtains samples twice as often as 11.025 kHz frequency.  The 44.1 kHz frequency is the sampling rate used for audio CDs.
Level button	Displays a dialog box for setting the recording level.
OK	Saves the audio settings.
Cancel	Closes the Change Audio Format dialog box without saving the audio settings.

See Also

[Setting Audio Options](#)

[Set Record Level Dialog Box](#)

## Video Source Dialog Box

Use this dialog box to specify the signal type and format of the incoming video signal. Options for controlling video-source signals vary among capture boards, so the options displayed in this dialog box depend on your video capture board. For information about setting the video-source attributes, see the documentation for your capture board.

See Also

[Setting the Video Source](#)



## Video Format Dialog Box

Use this dialog box to select the video characteristics of the captured video sequence. These characteristics include the frame size and color format. Because the capabilities of capture boards vary, the contents of this dialog box depend vary among different capture boards. For information about the options, see the documentation for your capture board.

See Also

[Setting Video Options](#)

## Video Display Dialog Box (Overlay Control or Video Monitor)

Use this dialog box to select options for displaying the video sequence in the VidCap window, or on a secondary output monitor. VidCap displays one of two dialog boxes for setting video-display options: Overlay Control or Video Monitor.

The Overlay Control dialog box is used with capture boards that support video overlay and lets you adjust the appearance of the video-source signal when displayed in VidCap. The Video Monitor dialog box lets you choose which signal appears on the output monitor.

These options don't affect the video sequence; they just affect the display.

See Also

[Setting Video Display Options](#)

## Capture Frames Dialog Box

Use this dialog box to manually capture individual frames. This manual-capture method is useful for creating slide shows or individual image files captured from a video source.

Each time you choose the Capture button, VidCap saves the current video frame to the capture file. When you're finished capturing frames, choose the Cancel/Close button.

You cannot capture audio when capturing individual video frames.

See Also

[Capturing a Video Sequence Manually](#)

## Capture Video Sequence Dialog Box

This dialog box lets you specify parameters for the capture session and the video sequence, including the video and audio format. If your source device supports the [Media Control Interface \(MCI\)](#), you can also specify information for automatically playing the video segment to capture.

The dialog box has the following options:

Option	Description
Frame Rate	<p>Sets the number of <u>frames</u> to capture per second. More frames per second provide better quality but require more storage space and faster data-transfer rates.</p> <p>You can type the number of frames per second, as well as a fractional value; for example, 0.1 specifies a frame every 10 seconds. The maximum is determined by the capabilities of your capture system, and the minimum is 1 frame per minute (0.0166 frames per second).</p>
Enable Capture Time Limit	<p>Specifies whether to capture for a preset length of time. If this option is selected, you can type a time-limit value in the Seconds box.</p>
Capture Audio	<p>Specifies whether to capture audio while capturing video, ensuring close synchronization between the audio and video tracks.</p>
Capture Method	<p>Specifies one of the following methods for transferring data from the <u>capture board</u> to the <u>capture file</u> on the hard disk:</p> <ul style="list-style-type: none"><li>▶ <u>Directly to Disk</u>: This method requires a fast system. A small number of image buffers are allocated.</li><li>▶ <u>Capture to Memory</u>: On slower computers, the capture-to-memory option lets you capture short video sequences without dropping frames. However, this method does not work well for lengthy video sequences (regardless of the speed of your computer). Most available memory is allocated for image buffers.</li></ul>
Video button	<p>Displays the <u>Video Format dialog box</u> for selecting frame size, color format, and other video attributes.</p>
Audio button	<p>Displays the <u>Audio Format dialog box</u> for selecting the audio sample size, sampling rate, and channels (mono or stereo).</p>
Compression button	<p>Displays the <u>Video Compression dialog box</u> for selecting compression routines to use during the capture process.</p>
MCI Control Of Source Video, MCI button	<p>Specifies that VidCap will control the video source during the capture process. Selecting this option automatically displays the <u>MCI Settings dialog box</u>.</p>
MCI button	<p>Displays the <u>MCI Settings dialog box</u> for specifying MCI playback controls for the video source. This button is only available if MCI Control of Source Video is selected.</p>
OK button	<p>Starts the capture session. Press the ESC key to end the capture session.</p>

Cancel button

Closes the dialog box without capturing video.



See Also

[Capturing a Video Sequence Automatically](#)

[Controlling the Video Source During Automatic Capture](#)

[Audio Format Dialog Box](#)

[Video Format Dialog Box](#)

[MCI Settings Dialog Box](#)

[MCI Step Capture Dialog Box](#)

## Capture Palette Dialog Box

This dialog box lets you create an 8-bit color palette using the colors of one or more video frames; you can then substitute it for the default capture palette. Use one of the following methods to capture the palette:

- ▶ You can capture from a video source playing at normal speed. Specify when to start and stop capturing colors, and VidCap builds a composite palette using the colors captured from the video frames.
- ▶ You can capture one frame of colors at a time, capturing key scenes containing the desired colors for the sequence.

With either method, capture several frames of video to obtain a representative sample of colors. Larger samples can provide a better selection of colors.

The dialog box has the following options:

Colors	Description
Colors	<p>Specifies how many color entries to use in the palette.</p> <p>With values from 1 through 236, VidCap builds a palette with the specified number of entries. With fewer colors, you reduce the size of the sequence (after compression) because fewer changes occur from frame to frame.</p> <p>With a value of 256, VidCap creates an identity palette that includes 236 colors captured from the video frames and 20 system colors reserved for use by Windows. An identity palette can provide better performance.</p>
Frame button	Captures colors from the current frame.
Start button	Starts capturing colors automatically from the video source.
Close button	Closes the dialog box. There will be a slight delay while VidCap computes the new palette.

See Also  
[Setting the Palette](#)

## MCI Settings Dialog Box

If your source device supports the Media Control Interface (MCI), you can use this dialog box to specify which segment to play. When you start capturing, VidCap will position and play the specified sequence. Playback won't start until you start the capture process.

The dialog box has the following options:

Option	Description
MCI Device	Specifies the MCI device to play. If your source-video device is not listed, you'll need to install an MCI driver for the device. Use the Drivers application in the Control Panel to install an MCI driver.
Source Capture Style	Specifies one of the following capture methods: <ul style="list-style-type: none"><li>▶ Play Video plays the video source at normal speed. VidCap captures the video sequence located between the Capture Start and Capture Stop positions.</li><li>▶ Step Video plays the video source frame-by-frame, allowing a larger <u>frame size</u>, higher frame rate, and optional compression. VidCap steps frame by frame, capturing single frames through the end of the video segment. After capturing the video frames, VidCap replays the selection at normal speed to capture audio. <b>Note</b> CLV videodisc players do not allow stepping between frames, so VidCap will report an error if you use the Step Video method on a CLV videodisc player.</li></ul>
Step Frame Averaging	The following two options are used with the Step Video capture method to bring out detail and reduce video noise: <ul style="list-style-type: none"><li>▶ 2x Spatial specifies whether to expand the frame size during capture to bring out more detail in the image. VidCap doubles the frame size captured and then uses spatial averaging to reduce aliasing effects. This technique enhances fine lines in the sequence, at the cost of some fuzziness.</li><li>▶ <i>n</i> Frames Temporal specifies whether to reduce video noise by repeatedly capturing frames and averaging out the noise from the captured images. Specify how many images to capture and average per frame. <b>Note</b> Some <u>capture boards</u> provide hardware routines for performing these enhancements. If your capture board includes such a feature, you should not select any of the step-frame averaging options provided by VidCap.</li></ul>
Capture Start	Specifies the starting time for the capture in hh:mm:ss.ff format.
Capture Stop	Specifies the ending time for the capture in hh:mm:ss.ff format. If you specified a capture-time limit in the Capture Video Sequence dialog box, VidCap will stop capturing video at either the capture-time limit or at the Capture

	Stop time, whichever is smaller.
Set Start	Sets the capture-start time to the current position of the MCI device. To position the device, you can use the controls on the player, or you can start the Media Player application and use the track bar to position the device.
Set Stop	Sets the capture-stop time to the current position of the MCI device.
OK	Saves the MCI settings. These settings are used when the capture session starts.
Cancel	Closes the dialog box without saving the MCI settings.

See Also

[Capturing a Video Sequence Automatically](#)

[Controlling the Video Source During Automatic Capture](#)

## MCI Step Capture Dialog Box

This dialog box displays status information during a frame-by-frame step capture. The dialog box includes the following buttons:

Button	Description
Stop	Stops the video capture. If audio capture was also specified, VidCap then rewinds the source device and replays it to capture the audio track.
Cancel	Stops the video capture without rewinding to capture the audio track.

See Also

[Capturing a Video Sequence Automatically](#)

[Controlling the Video Source During Automatic Capture](#)

## **Set Record Level Dialog Box**

This dialog box lets you monitor the recording level of your audio source. Observe the strength of the incoming signal, and adjust the volume on your source device so the volume peaks at approximately 80% of the audio range. To close the dialog box, choose OK.



See Also

[Setting Audio Options](#)

## Video Compression Dialog Box

This dialog box lets you specify software compression techniques to apply during a capture session. Because software compression requires processing time, it's generally inappropriate to use during a real-time capture, except at very slow frame rates. You can, however, use software compression during a step-frame capture.

**Note** The RLE compression method, which requires similar processing time during capture and playback, is the only one usable during real-time capture.

Some capture boards provide hardware-based compression that can be used during capture; however, these compression schemes are specified in the Video Format dialog box, not in this dialog box.

The contents of this dialog box are dependent on the video formats supplied by your capture board.

See Also

[Setting Video Options](#)

[Video Format Dialog Box](#)



**interleave**

A method of storing video and audio data together in a video file, such that a segment of video data is followed by a segment of audio data. By interleaving video and audio data, Video for Windows can maintain a smooth transfer of audio/video information while playing a video sequence from a hard disk or CD-ROM drive.

**track**

A linear depository of information within a video sequence. All video sequences have at least two tracks: a video track storing frames of video data, and an audio track storing segments of audio.

**frame**

A single unit of information within a video sequence. A video sequence consists of many frames of video and audio data; when the frames are played in sequence, you see an unbroken video sequence with accompanying audio playback.

**palette**

A collection of color information for a picture or video sequence. Video for Windows can use an 8-bit color palette, which provides up to 256 different colors for a video frame.

Video for Windows can use an 8-bit palette format. With this format, up to 256 color values can be stored in a table. Images within the video sequence reference the entries in this table; each pixel has an 8-bit value identifying which palette color to draw. The 8-bit palette format uses less storage space than the 16-bit and 24-bit formats, which do not use a palette (rather than reference a value in a table, they store color information directly with the pixel).

**bitmap**

An image format commonly used for scanned photographs and artwork. A bitmap divides a picture into a grid of pixels, with each pixel assigned a specific color. Bitmaps usually have .BMP or .DIB extensions.

**waveform audio**

A technique of re-creating an audio waveform from digital samples of the waveform. The sound track for a video sequence is stored as waveform audio data.

**insert mode**

One of two VidEdit editing modes. In insert mode, space is provided for data added to the video sequence; existing data is retained and pushed later in the sequence. When data is removed from a video sequence, data following the deletion is shifted back to cover the empty area.

**overwrite mode**

One of two VidEdit editing modes. In overwrite mode, data

added to the video sequence replaces any existing data at the insertion point. When data is removed from a video sequence, the frames storing the deleted data are retained (so an empty frame results).

### **frame rate**

The number of frames recorded for each second of video playback. Higher frame rates can provide smoother motion than lower frame rates.

### **dithering**

A technique for simulating an unavailable color by combining two or more available colors.

### **sampling frequency**

The rate at which digital- audio samples are taken. Higher sampling frequencies provide better fidelity but require more storage space.

### **sample size**

The amount of storage space used for each digitized portion of the audio track. Larger sample sizes provide greater dynamic range and, therefore, better audio reproduction (, but they require more storage space).

### **stereo (audio)**

Audio format in which two channels are used. Stereo audio can provide better sound reproduction but it requires twice the storage space as monaural (mono) audio.

### **mono (monaural audio)**

Audio format in which a single channel is used. Monaural audio requires half the storage space as stereo audio, which uses two channels of audio information.

### **codec, or Compressor/Decompressor**

A software component that provides compression services (while creating a video sequence) and decompression services (while playing a video sequence). The Video for Windows architecture provides for the use of multiple codecs, so you can choose the one that's most appropriate for your application.

### **data-transfer rate**

The speed at which data is transferred from a storage device to the processing hardware of the computer. Devices with higher data-transfer rates can provide better playback quality.

### **key frame**

A fully-drawn frame stored as a reference point for successive frames. Most video sequences store only the changes from frame to frame (they don't store a complete image for each frame). A key frame stores a complete frame image, so an application can jump to the key frame and obtain a fully-drawn image for that point in the video sequence.

**direct-to-disk capture**

VidCap transfers video data from the capture board directly to the MS DOS file system, using MS-DOS memory buffers for intermediate storage. If the hard disk falls behind during capture, VidCap automatically switches to the Capture To Memory option.

**capture to memory**

Rather than transfer data directly to disk, VidCap allocates memory using Windows (high memory) and copies video and audio data into these memory buffers. When these memory buffers are filled, however, the number of dropped frames quickly increases.

**video sequence**

A digital- video file created using Video for Windows. Video sequences consist of a series of frames of audio and video data. When played in sequence, the images and sound produce an animated video on the computer screen. Video sequences have a filename extension .AVI, for Audio-Video Interleaved.

**audio and video source**

The data stream captured as a digital- video sequence. Video sources include videotape and videodisc players, video cameras, and television tuners. Audio can also be captured from these devices.

**capture board**

A piece of computer hardware that receives video signals and stores incoming video images in a memory area that can be accessed by system and application software.

**audio board**

A piece of computer hardware that plays and receives audio signals. Audio boards have circuitry that convert analog signals into digital format (for recording), and convert digital signals into analog format (for playback).

**capture file**

A file created on the hard disk for the purpose of storing captured video and audio data. This file provides storage space for the capture session, allowing the capture to proceed without taking time to allocate additional disk space for video and audio data.

**Media Control Interface (MCI)**

A standard control interface for multimedia devices and files. MCI lets a multimedia application control a variety of multimedia devices and files. VidCap uses MCI to play video previews and to control source devices such as laserdisc players and videocassette recorders.

**pixels**

A single dot, or unit, within the computer display. The display is

made up of a grid of pixels, each of which has its own color value.

### **compression**

Compression reduces the storage requirements of a video sequence. Compression reduces the file size of the video sequence and also reduces the amount of data that must needs to be transferred to play a video frames. Because Since some storage devices (particularly CD-ROM drives) have a relatively low data-transfer rate, reducing the amount of data that must be transferred helps avoid skips and slowdowns during playback.

### **real-time capture**

With real-time capture, you capture video data from a source device playing at normal speed. For real-time capture, you need a computer system fast enough to keep up with the data coming in from the source device. Data must be captured and stored on the hard disk before the next frame of information is received.

### **step-frame capture**

With step-frame capture, you capture video one frame at a time, generally from a paused source device. You capture a frame, advance the source device to the next frame, and then capture the next frame. Step-frame capture provides an alternative if your computer system cannot capture in real time without losing data. Step-frame capture also lets you increase the frame size, use a larger color format, or perform software compression (because, since the system has more time to store the captured data).

### **video overlay**

The capability of watching a video source in a window on the computer. The video signal from the VCR, camcorder, or other source device is synchronized with the computer display and displayed within a window.

### **frame buffer**

The memory area on the capture board used to store video data captured from the video source signal.

### **8-bit color format**

A color format in which colors are stored in a separate table called a palette. The pixels within the video frame reference the entries in the palette (rather than store color information themselves). The palette format provides a maximum of 256 unique colors within a video frame. Each color entry in the palette can use any of 16 million colors. Most multimedia computers can display 8-bit images; fewer support the 16- and 24-bit formats.

The term "8-bit" refers to the amount of information encoded with each pixel. Each pixel contains an 8-bit number that



references one of the entries in the color table.

### **contiguous**

Residing within a single unbroken area of the disk. Hard disks are organized into sectors of data. A file might be stored across many sectors, and those sectors can reside in different areas of the hard disk. Because seeking to a different sector can take time away from the capture session, resulting in data loss, it's important to defragment the hard disk before capturing. This ensures the capture file resides in a contiguous area of the hard disk.

### **fragmented**

Residing on non-contiguous sectors of the hard disk. When a fragmented file is written or read, the computer must skip to different areas of the hard disk to access the sectors making up the file. Seeking to a different sector takes time and can result in the loss of incoming video data.

### **defragmentation**

Defragmentation utilities rearrange files so they reside in contiguous sectors of the hard disk. The DEFRAG command included with MS-DOS version 6.0 is one such utility.

### **16- and 24-bit color formats**

Video for Windows color formats that store color information directly with the pixel (rather than in a separate color table, as is used with the 8-bit format). This means there is no limit to the number of unique colors within a video frame.

The 16- and 24-bit formats are called true-color formats because they preserve more of the original colors of the video signal. The 16-bit format provides a range of 32,767 color choices per pixel; while the 24-bit format provides a range of 16 million color choices per pixel.

### **identity palette**

A palette containing the standard system colors arranged in a specific location (the top ten and bottom ten cells of the color table). An identity palette can be processed more quickly by Windows and can therefore provide improved display performance over a standard palette.

### **dropped frames**

Data lost during video capture. When capturing video, the system might not be able to finish processing the current video frame before receiving the next video frame from the source device. The incoming frame is ignored, or dropped, and a blank frame is stored in its place.

## **Menu Bar**

Contains a list of menus. You open menus and then choose commands from them to instruct VidCap to perform actions.

### **Set Capture File button**

Names and creates the capture file (same as the Set Capture File command on the File menu).

### **Edit Captured Video button**

Runs VidEdit and loads the captured video sequence into VidEdit for editing (same as the Edit Captured File command on the File menu).

### **Preview Video button**

Displays the captured frames in the VidCap display area (same as the Preview Video command on the Options menu).

### **Overlay Video button**

Displays the video signal in the VidCap display area (same as the Overlay Video command on the Options menu).

### **Capture Single Frame button**

Captures the current frame from the video board and displays it in the frame area (same as the Single Frame command on the Capture menu).

### **Capture Frames button**

Manually captures a sequence of frames (same as the Frames command on the Capture menu).

### **Capture Video Sequence button**

Automatically captures a sequence of frames in real-time or step-time (same as the Video command on the Capture menu).

### **Capture Palette button**

Builds a palette from one or more frames of the video source (same as the Palette command on the Capture menu).

### **Video Frame Display**

Displays either the captured video frame (the contents of the frame buffer on the capture board), or the incoming video signal (available only on overlay boards).

### **Status Bar**

Displays status information for the capture session.

