
CHAPTER 1

MCI Command Strings for MCIavi

See also AVI video device, MCI.DRV. See MCI:device driver. See MCIavi.DRV, MCIPION.DRV. MCI:command strings. AVI video device:described. AVI video device. See also MCIavi.DRV. Applications such as Visual Basic and Asymetrix ToolBook use MCI command strings to provide control for MCI devices. This chapter describes the MCI command strings for the Microsoft MCI video driver (MCIavi.DRV) that you can use with applications that support the MCI command-string interface. (Applications with this interface send the command strings to MCI with the **mciSendString** function.) For more information on using command strings and the command-string interface, see the *Multimedia Programmer's Guide* and *Multimedia Programmer's Reference* in the Microsoft Windows Software Development Kit. The same information is also available in the *Multimedia Programmer's Workbook* and *Multimedia Programmer's Reference* in the Microsoft Windows Multimedia Development Kit.

The following list summarizes the MCI command strings supported by MCIavi. This command set is taken from the digital-video command set for MCI. Any device-specific behavior affecting the MCI commands is also noted in this chapter.

About the MCIavi.DRV Driver

The MCIavi.DRV driver plays video sequences under the control of MCI commands. These video sequences can contain images, audio, and palettes. The image data is implemented either with color palettes or true-color information.

MCIavi.DRV supports 11, 22, or 44 kHz audio in an 8- or 16-bit format. Audio is synchronized with the video within 1/30 of a second. However, if audio hardware is not available, the driver will silently play the video sequence. MCIavi.DRV can drop video frames, if necessary, to play a sequence without audio interruption.

Custom Commands and Flags for MCIavi.DRV

The MCIavi.DRV:configuration options. MCI drivers:configuration options. AVI video devices:configuration options. MCIavi.DRV uses a subset of the digital-video command set except for the **configure** command. configure command:MCI. and two custom flags used by the **play** command. play command:MCI. The **configure**

command displays a dialog box for setting the operating options of the MCI_{AVI}. This dialog box contains the following selections:

Option	Description
XE "Window option:MCI"\$Window	Displays the video in a window.
XE "Full Screen option:MCI"\$Full Screen	Displays the video using the full screen with 320-by-240 resolution. This allows a 256-color display on 16-color devices.
XE "Zoom by 2 option:MCI"\$Zoom By 2	Stretches the video to twice its normal size.
XE "Skip Video Frames If Behind option:MCI"\$Skip Video Frames If Behind	Specifies to drop frames if the video falls behind. If this isn't selected, all the video frames will be shown and the audio will break up as necessary.
XE "Seek To Nearest Frame option:MCI"\$Seek To Nearest Full Frame	Specifies to go to the nearest frame on a seek . XE "seek command, MCI"\$ If this isn't selected, seek will go to the closest key frame prior to the specified frame.
XE "Play Only If Audio Device Available option:MCI"\$Play Only If Audio Device Available	Returns an error if an audio device is not available to play wave data. If this isn't selected and there isn't a wave-audio device available, audio data is ignored and the video is played.
XE "Don't Buffer Offscreen	Specifies that a copy of the display

option:MCI"\$Don't Buffer
Offscreen

window should not be maintained.

The custom flags used by the **play** commandXE "play command, MCI"\$ are **fullscreen** and **window**. These flags specify the display mode used for playing a video sequence. These flags are described with the **play** command.

MCI Command Strings

XE "AVI video devices:command strings"\$XE "MCIAVI.DRV:command strings"\$XE "MCI:command strings|described"\$XE "MCI devices:command strings"\$XE "Command strings, MCI"\$In general, a command string has another field following the command verb not explicitly indicated in the descriptions below. For most commands, this field contains a device name or alias as specified by a prior **open** command. The device name is used by MCI to route the command to the appropriate device driver and device-driver instance.

All commands accept the optional items **wait** and **notify**, although they are not explicitly listed in the command-string table. All commands, except **open** and **close**, also accept the optional item **test**.

The MCIAVI driver uses the **AVIVideo** keyword XE "AVIVideo, MCI command keyword"\$ to identify the driver type.

The MCIAVI driver supports the following command set:

Command	Description
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XE "capability
command,
MCI"\$**capability**
y item

Fills an application-supplied buffer with a string containing additional information about the capabilities of MCIAVI. The following optional *items* modify **capability**:

can eject	Returns false .
can freeze	Returns false .
can lock	Returns false .
can play	Returns true .
can record	Returns false .
can reverse	Returns false .
can save	Returns false .
can stretch	Returns true .
can stretch input	Returns false .
can test	Returns true .
compound device	Returns true .
device type	Returns digitalvideo .

has audio	Returns true .
has still	Returns false .
has video	Returns true .
uses files	Returns true .
uses palettes	Returns true . XE "capability command, MCI*"§
XE "close command, MCI"§ close	Closes this instance of the MCIavi and releases all resources associated with it.
XE "configure command, MCI"§ configure	Displays a dialog box used to configure MCIavi.
XE "cue command, MCI"§ cue <i>items</i>	Prepares MCIavi for playback and leaves it in a paused state. This command is modified by the following optional <i>items</i> :
output	Prepares MCIavi for playing.
to position	Positions the workspace to the specified

position.

Command	Description
XE "info command, MCI"§info items	Fills a user-supplied buffer with a string containing information about MCIAVI. The following optional <i>items</i> modify info :
	file Returns the name of the file currently loaded.
	product Returns Video for Windows .
	version Returns the release level of MCIAVI.
	window text Returns the text string in the title bar of the window associated with MCIAVI.
XE "open command, MCI"§open items	Initializes MCIAVI. The following <i>items</i> modify open :
	alias <i>alias</i> Specifies an <i>alias</i> used to reference this instance of MCIAVI.

<i>elementname</i>	Specifies the name of the device element (file) loaded when MCI _{AVI} opens.
parent <i>hwnd</i>	Specifies the parent of the default window.
style <i>stylevalue</i>	Specifies the style used for the default window. The following constants are defined for <i>stylevalue</i> : overlapped , popup , and child .
type AVIVideo	Specifies the device type of the device element. XE "open command, MCI*"§
XE "pause command, MCI"§ pause	Pauses the playing of motion video or audio.
XE "play command, MCI"§ play <i>items</i>	Starts playing the video sequence. The following optional <i>items</i> modify play :
from <i>position</i>	Specifies the position to seek to before beginning the play .
to <i>position</i>	Specifies the position at which to stop playing.
fullscreen	Specifies playing should use a full-screen display.
window	Specifies that playing should use the window associated with a device instance (the default).XE "play command, MCI*"§

Command	Description
<p>XE "put command, MCI"§put <i>items</i></p>	<p>Specifies a rectangular region that describes a cropping or scaling option. One of the following <i>items</i> must be present to indicate the specific type of rectangle:</p> <p>destination Specifies that the full client window associated with this instance of MCIAVI is used to show the image or video.</p> <p>destination at rectangle Specifies which portion of the client window associated with this instance of MCIAVI is used to show the image or video.</p> <p>source Specifies that the full frame buffer is scaled to fit in the destination rectangle.</p> <p>source at rectangle Specifies which portion of the frame buffer, in frame-buffer coordinates, is scaled to fit in the destination rectangle. XE "put command, MCI*"§</p>
<p>XE "realize command, MCI"§realize <i>items</i></p>	<p>Tells MCIAVI to select and realize its palette into a display context of the displayed window. One of the following <i>items</i> modifies realize:</p> <p>background Realizes the palette as a background palette.</p>

	normal	Realizes the palette normally used for a top level window (the default).
	window at rectangle	Changes the size and location of the display window. The rectangle specified with the at flag is relative to the parent window of the display window (usually the desktop). XE "realize command, MCI*"§
XE "resume command, MCI"§ resume		Specifies that operation should continue from where it was interrupted by a pause command.
XE "seek command, MCI"§ seek items		Positions and cues the workspace to the specified position showing the specified frame. One of the following <i>items</i> modifies seek :
	to position	Specifies the desired new position, measured in units of the current time format.
	to end	Moves the position after the last frame of the workspace.
	to start	Moves the position to the first frame of the workspace.XE "seek command, MCI*"§

Command	Description
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XE "set	Sets the state of various control items. One of the following <i>items</i>
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command,
MCI"§set *items*

must be included:

seek exactly on
seek exactly off

Selects one of two **seek** modes. With **seek exactly on**, **seek** will always move to the frame specified. With **seek exactly off**, **seek** will move to the closest key frame prior to frame specified.

speed *factor*

Sets the relative speed of video and audio playback from the workspace. *Factor* is the ratio between the nominal frame rate and the desired frame rate where the nominal frame rate is designated as 1000.

time format
format

Sets the time format to *format*. The default time format is **frames**. **Milliseconds** can be abbreviated as **ms**. MCIAVI supports **frames** and **milliseconds**.

audio off

Disables audio.

audio on

Enables audio.

video off

Disables video.

video on

Enables video.XE "set command, MCI*"§

XE "setaudio
command,
MCI"§setaudio
items

Sets various values associated with audio playback and capture. Only one of the following *items* can be present in a single command, unless otherwise noted:

	off	Disables audio.
	on	Enables audio.
	volume to factor	Sets the average audio volume for both audio channels.
XE "setvideo command, MCI"%setvideo items	Sets various values associated with playback. The following <i>items</i> modify setvideo :	
	off	Disables video display in the window.
	on	Enables video display in the window.
	palette handle to handle	Specifies the handle to a palette. XE "setvideo command, MCI*"%

Command	Description
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XE "signal command, MCI"%signal items	Marks a specified position in the workspace. MCI*AVI supports only one active signal at a time. The following items modify signal :
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	at position	Specifies the first frame to be marked.
	cancel	An optional parameter which indicates that the signal indicated by the uservalue should be removed from the workspace.
	every interval	Specifies the period in the current time format after which the succeeding marks should be placed.
	return position	An optional parameter which indicates that the MCI _{API} should send the position value instead of the uservalue value in the Window message.
	uservalue id	Specifies a value associated with this signal request that is reported back with the Windows message. XE "signal command, MCI*"§
XE "status command, MCI"§ status item		Returns status information about this instance MCI _{API} . One of the following <i>items</i> modifies status :
	audio	Returns on if either or both speakers are enabled, and off otherwise.
	forward	Returns true .
	length	Returns the length of the loaded video sequence in the current time format.
	media present	Returns true .

mode	Returns one of the following: not ready , paused , playing , recording , or stopped .
monitor	Returns file .
nominal frame rate	Returns the nominal frame rate associated with the file in units of frames per second times 1000.
number of tracks	Returns the number of tracks in a video sequence (normally 1).
palette handle	Returns the palette handle.
position	Returns the current position in the workspace in the current time format.
ready	Returns true if this instance of MCI_AVI is ready accept another command.
reference frame	Returns the nearest key-frame number that precedes <i>frame</i> .

Command	Description
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seek exactly	Returns on or off indicating whether or not seek exactly is set.
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speed	Returns the current playback speed.
start position	Returns the start of the media.
time format	Returns the current time format (frames or milliseconds).
unsaved	Returns false .
video	Returns on or off depending on the most recent setvideo .
window handle	Returns the ASCII decimal value for the window handle associated with this instance of MCIAVI.
window visible	Returns true if the window is not hidden.
window minimized	Returns true if the window is minimized.
window maximized	Return true if the window is maximized.XE "status command, MCI*"§

XE "step
command,
MCI"§**step**
items

Advances the sequence to the specified image. This command is modified by the following options:

by frames	Specifies the number of frames to advance
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		before showing another image. You can specify negative values for <i>frames</i> .
	reverse	Requests that the step be taken in the reverse direction.XE "step command, MCI*"§
XE "stop command, MCI"§ stop <i>item</i>		Stops playing.
XE "update command, MCI"§ update <i>items</i>		Repaints the current frame into the specified display context. The following <i>items</i> modify update :
	at rect	Specifies the clipping rectangle relative to the client rectangle.
	hdc hdc	Specifies the handle of the display context to paint.
	paint	An application uses the paint flag with update when it receives a WM_PAINT message intended for a display DC. XE "update command, MCI*"§

Command	Description
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XE "where command,	Returns the rectangular region that has been previously specified, or defaulted, using the put command. The following <i>items</i> modify
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MCI***where**
items

where:

destination	Returns a description of the rectangular region used to display video and images in the client area of the current window.
destination max	Returns the current size of the client rectangle.
source	Returns a description of the rectangular region cropped from the frame buffer which is stretched to fit the destination rectangle on the display.
source max	Returns the maximum size of the frame buffer.
window	Returns the current size and position of the display-window frame.
window max	Returns the size of the entire display.XE "where command, MCI*"§

XE "window
command,
MCI***window**
items

Provides an instance of MCIAVI with a window handle to the window that will be used to display images or motion video. The following *items* modify **window**:

handle <i>hwnd</i>	Specifies a window to be used with this instance.
handle default	Specifies that the window associated with this instance should be the default window created during the open .

state <i>showvalue</i>	This command issues a ShowWindow call for the current window. The following constants are defined for <i>showvalue</i> : hide minimize restore show show maximized show minimized show min noactive show na show noactivate show normal.
text <i>caption</i>	Specifies the text placed in the title bar of the window. XE "window command, MCI*"§XE "Command strings, MCI*"§XE "MCI devices:command strings*"§XE "MCI:command strings described*"§XE "MCI\AVI.DRV:command strings*"§XE "AVI video devices:command strings*"§
