Motion Pixels Video Interactive
Installation & Playback
Version 2.1β

System Requirements

Minimum System Requirements	Recommended System Requirements
486 DX 66Mhz CPU	Pentium 75 MHz CPU or better
8 MB RAM	16 MB RAM or better
128K Cache Memory	256K Cache Memory or better
420 MB IDE Hard Disk	1 GB SCSI Hard Disk or better - AV Rated
1 MB VESA Local Bus Video Adapter	1 MB PCI Video Adapter or better
Quad-speed (4x) CD-ROM drive	Quad-speed (4x) SCSI CD-ROM Drive
Sound Blaster or 100% Compatible Sound Card	Sound Blaster or 100% Compatible Sound Card
DOS 5.0	DOS 6.0 or better
Microsoft Windows 3.1	Microsoft Windows 3.1, Workgroups for Windows 3.11, or Windows '95
Microsoft Video for Windows Runtime - Version 1.1d or 1.1e	Microsoft Video for Windows Runtime - Version 1.1d or 1.1e
A 14.4KB Modem with Internet Connection	A 28.8KB Modem with Internet Connection

Note: *A CD-ROM drive and a SCSI hard disk are not necessary when playing back video clips from the local hard drive.*

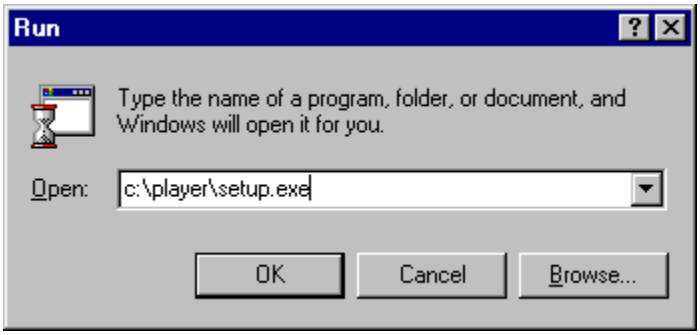
Note: *A fast modem will shorten the time to download video clips, documents, installation files etc.*

Program Setup

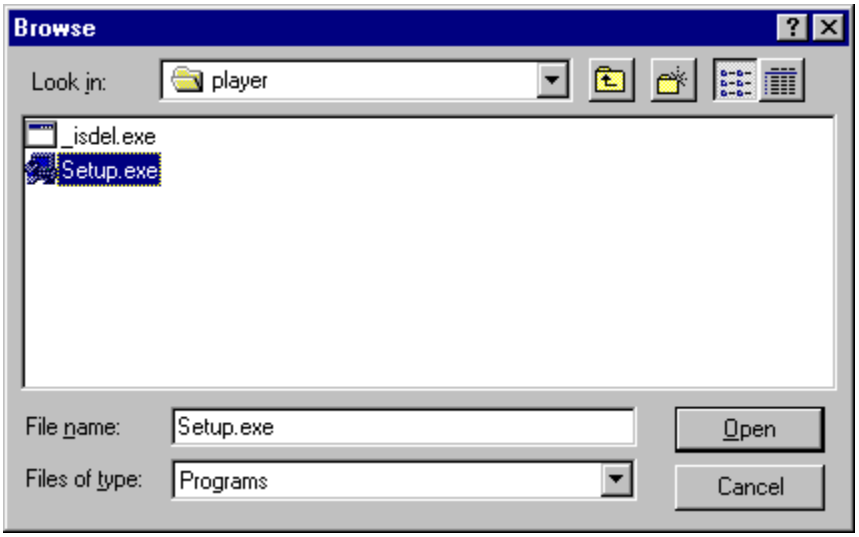
Note: *All files have the .ZIP extension. Use the PKUNZIP.EXE utility to decompress all files.*

The Motion Pixels Internet Web Site (**http://www.motionpixels.com**) contains all the necessary files to download. Download the file "PLAYER.ZIP"and uncompress it using the PKUNZIP utility.

1. Go to the Windows Program Manager and click on File, then Run. The Run dialog box will appear.



2. In the Command Line dialog box, type in the directory and path where the Motion Pixels files have been downloaded. Click on the Browse button to search the drive and directory path.



3. Select the SETUP.EXE file, then click on OK. Follow the Motion Pixels setup instructions. The Motion Pixels Program Group should appear.

A list of the files that are included in the setup routine are:

MVIAware.exe	Motion Pixels Video Interface. Plays back Motion Pixels compressed Video for Windows AVI files with various resizing options.
MVIcodec.dll	Device driver file for Motion Pixels resizing playback.
MVIintro.bmp	Default image file loaded into the MVI player.
MVIplay.exe	Executable program for Motion Pixels Video Interactive. Works with WMVIplay.exe.
MVIplay.pif	Motion Pixels Video Interactive program information file. Use for DOS playback during Windows session.
MVIvxd.exe	Protected-mode device driver for MVI executable program.
Readme.txt	ASCII text file containing release information and uninstall instructions.
WMVIplay.exe	Motion Pixels Video Interactive full-screen only playback interface for playing .MVI files in a DOS session under Windows.
Win32s Application	Microsoft's 32-bit protected mode software for use with the Motion Pixels compressor under Windows 3.1 or Windows for Workgroups 3.11.
WMVIplay.hlp	Motion Pixels Video Interactive Windows help file.
MVIunins.exe	Motion Pixels uninstaller.

Other files that are available to download:

Video Clips	Various video snippets supplied by the Motion Pixels Web page to download. See the associated Web page for a list of available files.

Documentation	Various documents on playback, capture and compression, troubleshooting, etc. in Microsoft Word or Windows Write format.
Win32s Application	Microsoft's 32-bit protected mode software for use with the Motion Pixels Windows compressor under Windows 3.1 or Windows for Workgroups. Win32s can be found at: FTP.MICROSOFT.COM\ SOFTLIB/MSLFILES/PW1118.EXE
Video For Windows WIndows Runtime files can be	Video playback application for Microsoft Windows 3.1 or for Workgroups 3.11. The Video for Windows found at:

FTP.MICROSOFT.COM/SOFTLIB.MSLFILES/WV1160.EXE

Note: *The Video for Windows Runtime 1.1d or 1.1e is not required for MVI formatted files.*

Note: *The Win32s application is not necessary for Motion Pixels MVI playback. It is only required to do compression under Windows 3.1 or Windows for Workgroups 3.11. Run the SETUP.EXE supplied with the Win32s program and restart Windows.*

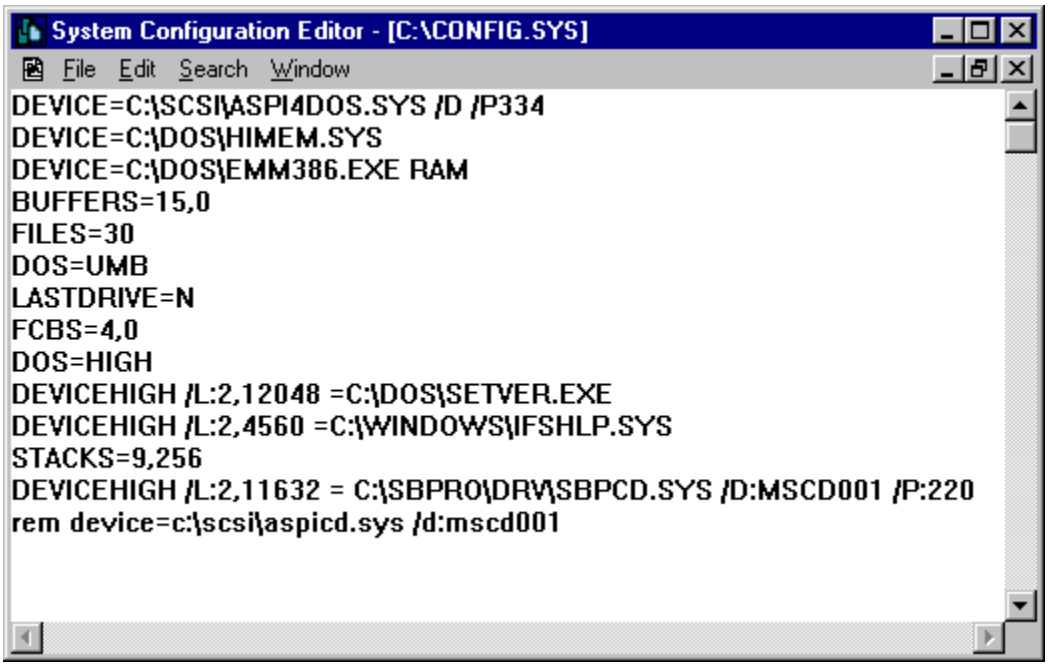
System Configuration

1) Motion Pixels requires that a DPMI interface be installed forvideo playback. If Microsoft Windows 3.1 Windows for Workgroups, or Windows '95 is on your system, a DPMI interface is already included. If you are using QEMM memory manager, go to *QSETUP* and enable the DPMI option.

2) Depending on the CD-ROM device driver, it may be necessary to edit your CONFIG.SYS file to load the driver into lower memory.

a) Go to the DOS prompt (C:>) and type "*edit c:\config.sys*"

b) Look for something like:
DEVICEHIGH /L:2,11632=C:\SBPRO\SBPCD.SYS /D:MSCD001 /P:220
and change the line to:
DEVICE=C:\SBPRO\SBPCD.SYS /D:MSCD001 /P:220

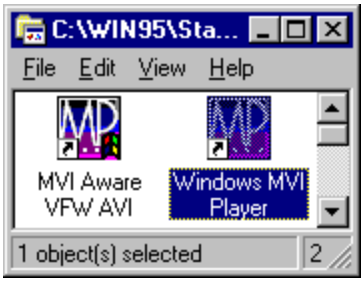


c) Save the file and reboot the system. This will load the CD-ROM device driver into low memory.

The section "Playing Motion Pixels Video Interactive Files" provides details and procedures on how to play back Motion Pixels MVI formatted video clips using the WmviPlay application.

Playing Motion Pixels Video Interactive Files

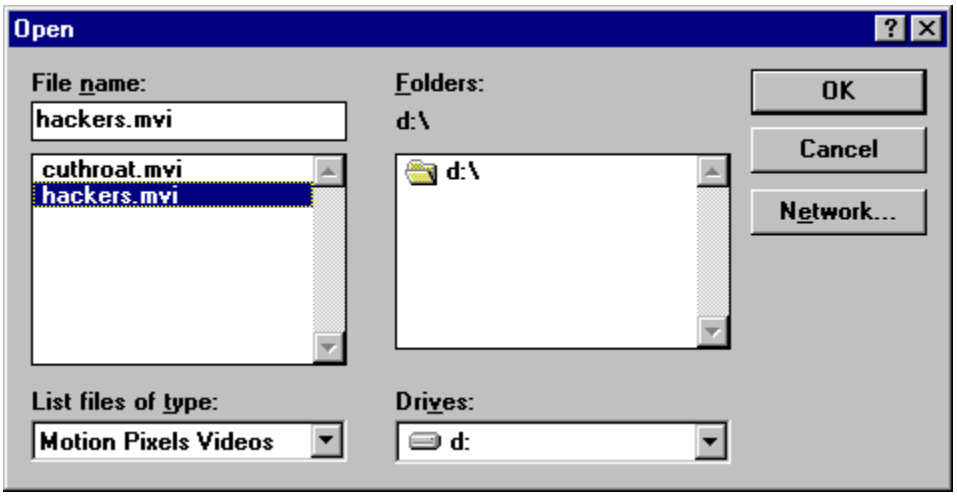
1. In the Motion Pixels Program Group, click on the WmviPlay icon.



2. The "Windows MviPlay dialog box will appear.

3. In the toolbar, select File, then Open New Video.

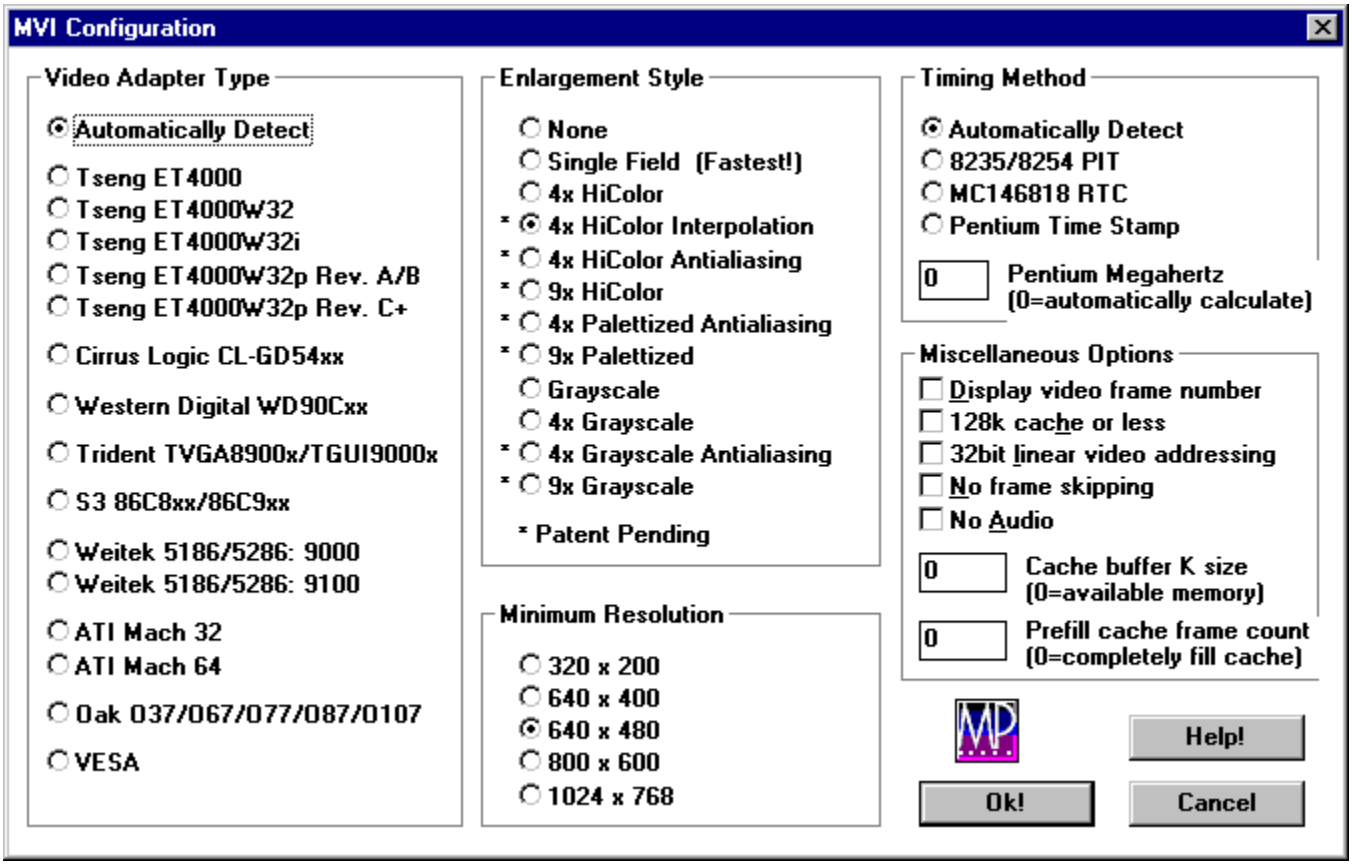
4. A list of MVI files should appear in the File Name directory box. If there are no files present, make sure the the Drive leter and Directories path are selected. Choose a video file to play back, then click OK.



5. A bitmapped image of the first frame of video will fill the playback window, with the name of the video file displayed at the top of the toolbar.

6. Select File in the toolbar, then choose the Playback Style option. The MVI Configuration dialog box will appear.

7. The MVI Configuration dialog box contains five sections: Video Adapter Type, Enlargement Style, Minimum Resolution, Timing Method, and Miscellaneous Options. Each section is explained briefly below.



Video Adapter Type - The MVI Configuration dialog box contains a list of supported chipsets. If the MVI program cannot automatically detect the installed video chipset, one of the video drivers can be selected to force that particular video driver. If your installed video chipset is not listed, the VESA driver supplied by your video card manufacturer can be used. The default is "Detect Automatically".

Note: *If your VESA driver is not available, contact your video card manufacturer.*

Enlargement Style - See the "Motion Pixels (MVI) Configuration Resizing Options" for complete information on resizing techniques.

Minimum Resolution - Five different screen resolutions are available for the Fullscreen Playback mode, ranging from 320 x 200 pixels to 1024 x 768 pixels. The default resolution is 640 x 480 pixels.

Timing Method - The default setting automatically determines which clock chip on the PC motherboard is available to synchronize the interleaved audio/video. The Pentium Time Stamp is a completely different timing method built into the Intel Pentium chipset. The Pentium CPU speed is automatically detected when you specify a default value of zero. The MCI 144818 RTC (Real-Time Clock) chipset is incorporated on most 486 DX motherboards. Select this chipset to improve playback performance on 486DX system. The default setting is "Detect Automatically".

Miscellaneous Options - There are five checkboxes and two cache options:

Display Video Frame Number - Places a numeric counter in the lower left-hand corner of the screen during video playback. This option can be used to calibrate frame rates. The default setting is unchecked.

128K Cache or Less - This option should be checked if your computer system that has 128K of on-board cache RAM. Systems with 256K or 512K should leave this option unchecked.

32-bit Video Linear Addressing - Support for video adapters and system buses that can address more than the 16-bit 64K limit. Memory on the video adapter needs to be addressed in a contiguous segment for best system response. The default is unchecked.

No frame Skipping - Forces all video frames to play back. Audio portions may drop out during playback if data transfer rate cannot keep up between source file (hard disk, CD-ROM drive, etc.) and computer bus. The default is unchecked.

No Audio - Enables and disables the audio portion of a video clip. The default is unchecked.

Cache Buffer K Size - This option defines the amount of RAM (in Kilobytes) that can be allocated for caching video content before playback begins. This amount can range from 1KB to the amount of physical memory on the computer system. The default is zero, which

completelyfills the video cache.

Prefill Cache Frame Amount - This option causes a defined number of video frames to be cached into memory. The default is zero, which completely fills the video cache.

Once the video playback configuration has been selected, click on OK to proceed.

Motion Pixels (MVI) Configuration Resizing Options

None: Video clip retains its original size.

Single Field: Video retains its original size, but odd fields are removed for fastest playback. Use this mode on slower computers to improve playback performance.

4x HiColor: Video plays back four times its original size in 32,768 colors (regardless of video adapter).

4x HiColor Interpolation: Video plays back four times its original size in 32,768 colors (regardless of video adapter), providing horizontal color enhancement.

4x HiColor Anti-aliasing: Video plays back four times its original size in 32,768 colors (regardless of video adapter). Antialiasing smoothes an image which contains areas of high contrast.

9x HiColor: Video plays back nine times its original size.

4x Palletized Anti-aliasing: Video plays back in 256 colors at 4 times its original size with improved playback performance compared to **4x HiColor** mode. Antialiasing smoothes an image which contains areas of high contrast.

9x Palletized: Video plays back in 256 colors at 9 times its original size. Works well for 160 x 120 video clips.

Grayscale: Video plays back at original size in black and white.

4x Grayscale: Video plays back at 4 times original size in black and white.

4x Grayscale Anti-aliasing: Video plays back at 4 times original size in black and white. Antialiasing smoothes an image which contains areas of high contrast.

9x Grayscale: Video plays back at 9 times original size in black and white.

8. In the toolbar, click on File, then Play Video. The screen will blank and the video clip will play back with the selected screen resolution and resizing options. Video playback can also be started from the small button in the lower left-hand corner.

Note: *The Motion Pixels Video Interactive Interface plays video clips in a DOS shell under Windows. Playback under DOS directly can be achieving by installing a DMPI interface on the computer system. QEMM offers a DMPI interface during the QSETUP installation. See the section, "Playback Directly From DOS" for further information.*

9. Once the video clip has completed playing back, the Windows Program manager interface will return. You can choose other Enlargement Styles or Minimum Resolutions to experiment with to get the video playback results for your application.

The File Menu

Open New Video - Loads a new AVI video clip compressed with the Motion Pixels codec from the currently selected directory. Other directories and drives can be selected from this dialog box.

Close This Video - Clears the video buffer of the currently loaded AVI file.

Play Video - Blanks the screen, then plays the video clip with the selected MVI Configuration. See the previous section on choosing playback parameters.

Playback Style - See MVI Configuration section for resizing options.

About - Displays the members of the Motion Pixels development team, copyright information, and the current version number.

Exit - Closes and exits from the MviAware program.

Playing Video Clips Directly from DOS

1. If a DMPI interface has been installed on your system, there is no need to execute the MVIPLAY.EXE through the Windows DOS shell. Go the the directory where the Motion Pixels files are located and type MVIPLAY /? for a list of playback options.

Playback Options

/A - Disables the audio portion of the video clip during playback.

/Cn[,m] - Sets the cache buffer size in Kilobytes and the number of frames cached.

/Dn - Video Display Type - One of the unique playback options allows video to be resized and operation at different color depths. ***n****=number of options.*

- **/D0** - *No Resizing* - plays original size video in 32,768 colors
- **/D1** - *Single Field* - plays only even fields of original size video in 32,768 colors
- **/D2** - *4X HiColor* - plays video four times its original size in 32,768 colors
- **/D3** - *4X HiColor Interpolation* - another 4x video playback option in 32,768 colors
- **/D4** - *4X HiColor Anitaliasing* - another 4x option in 32,768 colors. Good for video content with many horizontal or vertical lines in the image
- **/D5** - 9X *HiColor* - plays video at nine times its original size
- **/D6** - *4X Palettized Antialiasing* - plays video at four times its original size in 256 colors, good for video cards that do not support more that 256 colors
- **/D7** - *9X Palettized* - plays video at nine times its original size in 256 colors
- **/D8** - *Grayscale* - plays video at original size in 256 shades of gray
- **/D9** - *4X Grayscale* - plays video four times its original size in 254 shades of gray
- **/D10** - *4X Grayscale Antialiasing* - plays video four times its original size in 254 shades of gray, increases contrast
- **/D11** - *RGB Grayscale Horizontal* - plays video nine times its original size in 254 shades of gray

/F - Displays the frame number in lower left-hand corner of the screen

/H - 128 K on-board cache memory or less

/L - 32-bit linear video addressing (Tseng Labs/ATI Mach/Weitek)

/N - No frame skipping

/Sn - *Screen Resolution* - Forces video display adapter to a specific amount of display area on the screen. Video playback size for a specific file will depend on which screen resolution is selected. *n= number of option*

- **/S0** - 320x200 pixels
- **/S1** - 640x400 pixels
- **/S2** - 640x480 pixels (default)
- **/S3** - 800x600 pixels

/S4 - 1024x768 pixels

/Tn[,m] - *Synchronization Timing Type* - Determines which clock chipset is used for synchronizing audio\video playback. Three modes are available: ***n****=number of option*

/T0 - 8235/8254 PIT - (Default for 486 machines)
/T1 - MC146818 RTC (Real-time clock)
/T2 - Pentium Time Stamp - (Default for Pentium machines) ***m****=Pentium CPU speed*

/Vn[,m] - *Specifies video card manufacturer and chipset model #.* ***n****=chipset,* ***m****=model number*

/V0 - Autodetect (default)
/V1 - Tseng Labs ET4000/W32/W32i/W32p
- **/V1,1** - ET4000
- **/V1,2** - ET4000W32
- **/V1,3** - ET4000W32i
- **/V1,4** - ET4000W32p
- **/V1,5** - ET4000W32p Rev. C+

/V2 - Cirrus Logic CL-GD54xx
/V3 - Western Digital WD90Cxx
/V4 - Trident TVGA 8900/TGUI9000x
/V5 - S3 86c 8xx/86c9xx
/V6 - Weitek 5186/5286
- **/V6,1** - 9000
- **/V6,2** - 9100

/V7 - ATI
- **/V7,1** - Mach 32
- **/V7,2** - Mach 64

/V8 - Oak 037/067/077/087/0107
/V255 - VESA

Note: Any values not specified in the playback syntax will be set at the default values

Examples:

MVIPLAY /F /D2 D:\m240-161.mvi

This file will play the file called "*m240-161*" (which is 240x180 pixels in size at a 16:1:1 compression ratio) from the CD-ROM drive "*D:*" in a 480x360 pixel window. The frame number will be displayed in the lower left-hand corner of the screen.

mVIplay /D6 e:\NATURE.mVI

This video will appear at twice its original size in the 256-color Patettized Antialiasing mode as it

is loaded from the CD-ROM drive "E:"

mVIplay /n /s0 c:\test.mpx

The video clip will play back in its original size from the root directory of the local hard disk with the screen resolution set to 320x200 and not skip any frames.

MVIPLAY /C1024 /D1 C:\VIDEO.MVI

This video will cache 1024 Kilobytes od data before playback begins. The even fields only will play back.

Experiment with the various playback modes and options to see which results are acceptable for your particular application.