



Video Analysis Software by



User Guide

MotionView™

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Introduction

Purpose of this Document

This document provides detailed explanations of the various functions, controls, and concepts used in the operation of MotionView™, along with practical scenarios describing how you might use these to the fullest advantage in your work with video analysis. We recommend beginning with [Getting Started: Overview of Work Space](#) to quickly become familiar with the layout and key features of MotionView™. See also our [online tutorials](#). To download the latest edition of this user guide see www.allsportsystems.net installation guides.

About All Sport Systems, Inc.

Established in 2005, AllSportSystems® has developed into a world class team of highly focused professionals with a unique set of skills. We are a small company having a lot of fun while creating some pretty cool products. Most of our physical products are fabricated in-house on our state-of-the-art industrial sewing and CNC routing machines. The future's looking bright for AllSportSystems® thanks to an ever-growing and loyal customer base. We look forward to the opportunity to earn and retain your business! Below is a little more about our products:

Our [MotionView™ video analysis software](#) has been licensed by over 14,000 customers and is the catalyst behind many of our hardware products. Our multi-camera [Nomad™ video coaching systems](#) have been installed at schools and sports venues around the world through direct customer relationships as well as partnerships with private-label distributors. Learn more.

Our versatile line of heavy duty [Laptop Tripods](#) have been adopted as the gold standard by coaches in the field, and have evolved into the perfect portable computer platforms for insurance adjusters, IT departments, musicians and DJs.

In recent years we have created our own line of [Home Golf Simulators](#) and accessories, including our small-footprint MiniBay™ and SuperBay™ golf simulator enclosures, the [TerraShield™](#) projector enclosure, and much more.

The newest addition to our product line is the [FlightPanel-Dash™](#) flight simulator instrument panel for home cockpits, the easiest way to create a realistic flight sim experience for multiple airplane types.

About MotionView™

MotionView™ enables slow motion video analysis of any type of motion or activity. It is ideally suited for the physiologic and kinesthetic study of any type of motion.

MotionView™ has been intelligently designed in a somewhat generic fashion so as to reach the largest audience and number of applications. MotionView™ makes it easy to capture, analyze, synchronize, and compare multiple videos as well as to create instructional videos based on your observations.

MotionView™ is designed for Coaches, instructors, educators, scientists, doctors, and professionals in many fields. In the study of kinesthetics and motion such professionals have found our software invaluable. We are confident that you will find MotionView™ just as valuable to your work.

[View the software license for MotionView™](#)

New releases

MotionView is regularly being reviewed and upgraded to meet customer expectations. Major upgrades and improvements are released periodically. Notice of new releases are posted to Facebook. [Follow us on Facebook to receive update notices.](#)

Upgrades and Refresh

When you purchase MotionView you also receive free upgrades for one year. If you wish to upgrade to a release beyond one year, you can purchase a refresh, [see here for pricing](#). A refresh will upgrade you to the latest version of either Basic or Elite depending on the license you purchased.

What's New with MotionView™ Version 10.0

New keyboard shortcuts: Easier access to audio trigger dialog from the main screen make the use of MotionView even faster and easier to use. Now AutoPlayback, AutoRecord, and Audio Trigger have specific keyboard shortcuts for toggling these features on or off. These changes make it possible to now control these functions through a programmable USB foot pedal system expanding the handsfree use of MotionView™. See [Keyboard Shortcuts](#).

Video Deletion Refined: When deleting recordings on multiple camera systems, MotionView™ will now delete all accompanying camera views whether they are deleted from the Thumbnail Panel or Video Manager. In previous editions this function only occurred when deleting files from the Thumbnail Panel. No more hidden files mistakenly being left behind! See [Video Deletion](#).



Camera Configurations Icon: To avoid confusion with the Show/Hide Controls button, the Camera Configurations button on the toolbar got a new look.

See [Camera Configurations](#).

Revised User Manual: User Manual has been completely redesigned with greatly expanded Table of Contents so finding information about a certain feature is now easier than ever. Let us know what you think! Email us at at support@allsportssystem.com with your comments.

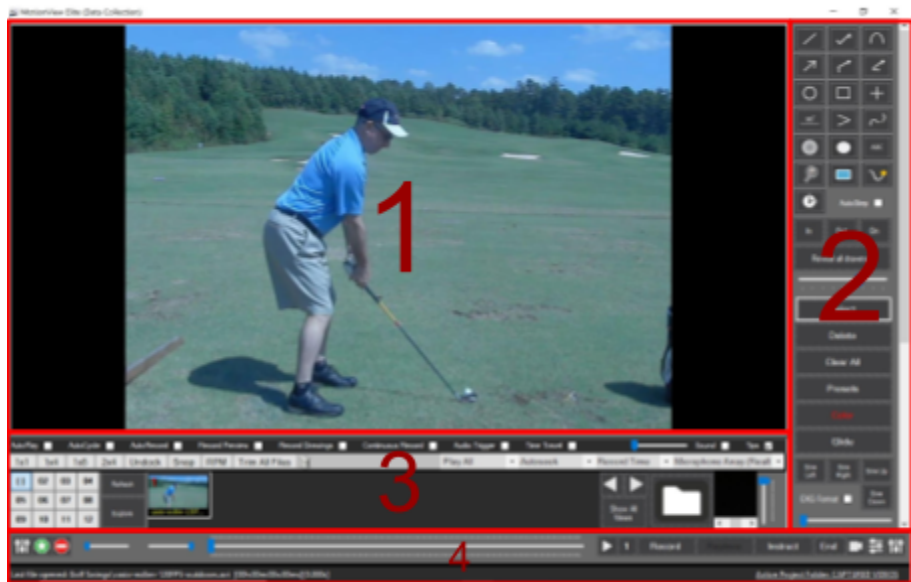
Stop!Watch Videoanalyse App: All Sport Systems, Inc. has partnered with Scenator Entertainment to integrate **Stop!Watch Videoanalyse™** with MotionView™. This is a great way to speed up tagging game film.

See [Tag Key Events using Stop!Watch Videoanalyse App](#)

Getting Started: Overview of Work Space

Each numbered section corresponds to the different areas of the MotionView™ work space.

Following is a brief description of each section as well as links for more detailed information about each control.



1 - Video Slots

This area of the work space contains video slots where videos can be displayed and synchronized for analysis.

MotionView has 8 video slots and MotionView Elite has 12 video slots.

See [Video Players/Slots](#).

2 - Drawing Tools

This area contains drawing tools, and features related to mark up and video analysis.

See [Drawing Tools](#).

3 - Feature Switches, Function Bar, Control Panel and Thumbnail Panel

This area contains several controls and features as follows:

See [Feature Switches](#)

See [Function Bar](#)

See [Video Control Panel](#)

See [Thumbnail Panel](#)

4 - Toolbar and Status Bar

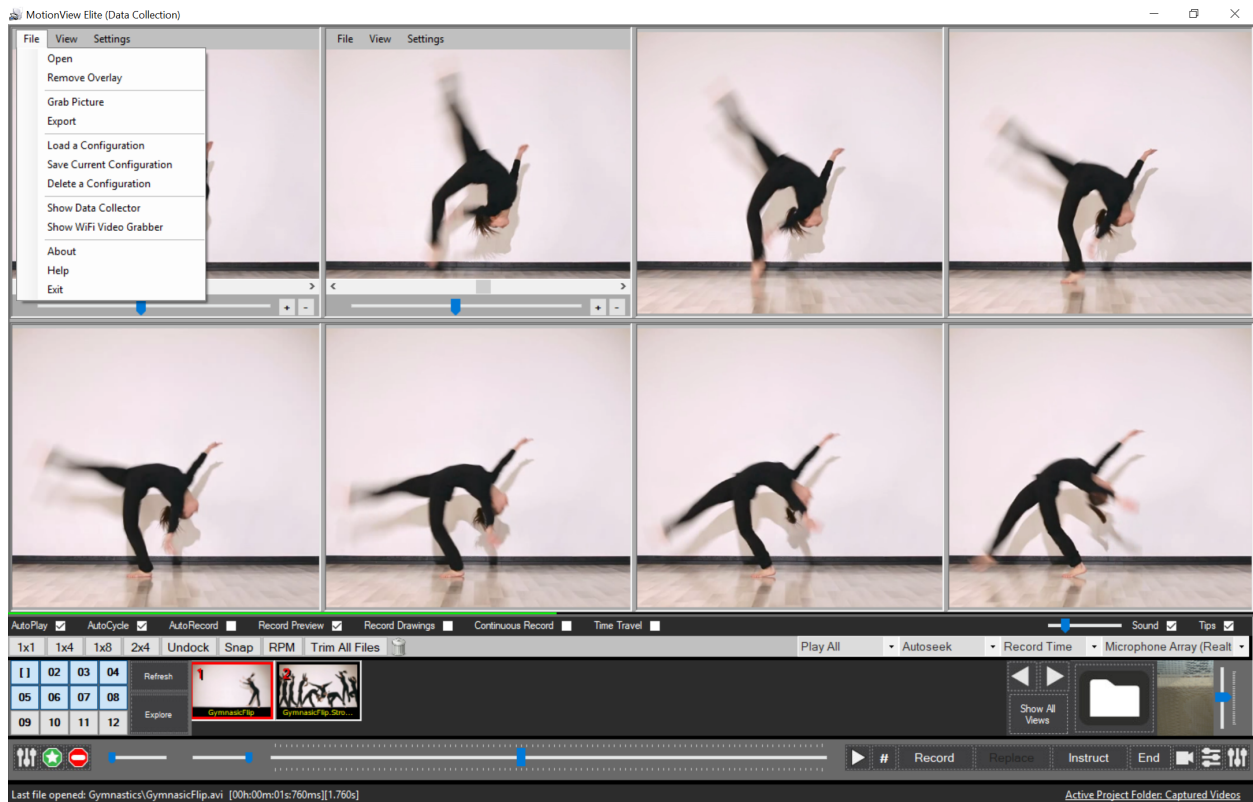
The toolbar is located toward the bottom of the MotionView Application window and provides quick access to controls used for (1) hiding controls, (2) setting begin and end points (3) play/pause (4) starting instruct mode, connecting and configuring cameras, starting/stopping live preview, etc. See [Toolbar](#).

At the very bottom of the Application window is a status bar providing information about the currently loaded file and Active Project folder. See [Status Bar](#).

TIP: [Checkout our online video tutorials](#)

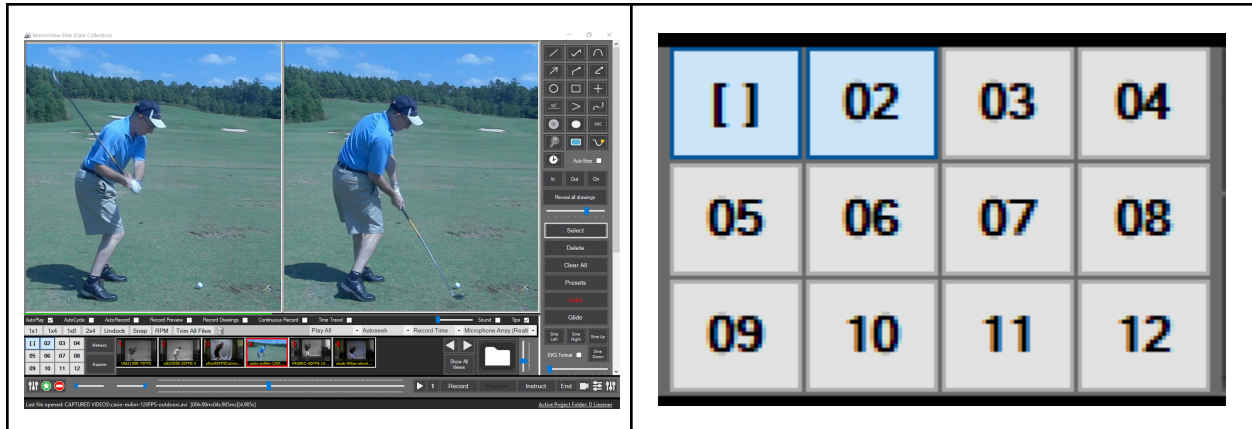
Video Players/Slots


The upper portion of the work space is where videos can be loaded and displayed. Within this area you can display up to 8 different videos. The Elite version of the software can display up to 12 different videos at the same time. To load a video to a video slot you can drag and drop videos from the [Thumbnail Panel](#), use the open command from the [Drop Down Menu](#), or you can load to a specific slot directly from the [Video Manager](#).



Video Control Panel

To open/close video slots use the Video Control Panel. As you click on the numbered buttons the corresponding video slot will open/close. The picture below shows video slots #1 and #2 open and loaded with videos. To load a video into an open video slot, simply drag and drop a video from the [Thumbnail Panel](#) to an open video slot. For more details about loading videos see



The first button  will resize all visible video slots to equal proportions. Video slot #1 will always remain open.

Drop Down Menus

Each video slot provides a menu of additional commands and settings. These settings apply only to a single video slot. The file menu in video slot #1 is unique and will differ slightly from the file menu of video slots 2 and above. To access the menu hover your mouse near the top of one of the video slots and a menu will appear at the top of the video slot. A description of each menu item is provided below.

File Menu

Open

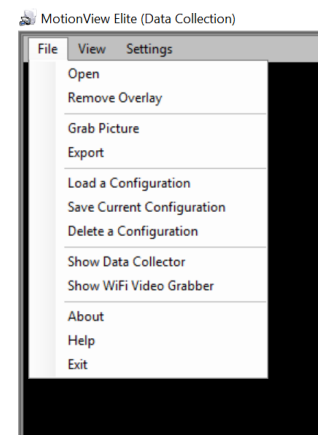
Opens a new video in the video slot.

Remove Overlay (present in video slot 1 only).

A method of semi-transparently superimposing two videos, so that one video is visible “on top” of another. Overlay on Video #1 (present in video slots 2 to 12 only). To learn more about this feature see [Using Overlay feature](#).

Grab Picture

Creates a JPG picture file of the image displayed in the selected video. The picture can be Saved, Printed, or Copied to the clipboard. If you wish to take a picture of all video slots use the “Snap” button located in the Misc Panel.



Export

Displays the Export Video Options panel, providing options to create new video files, JPG picture series, etc. See [Exporting Video Files](#).

View Menu

Grid

Displays a static grid on top of the video. The grid spacing can be adjusted using the Select tool.

Flip Video

Horizontally flips the video, turning a right handed subject into a left handed subject and vice versa.

Full screen

Displays the video slot video as a full screen image. Click View/Full Screen again to exit full screen mode.

Internet

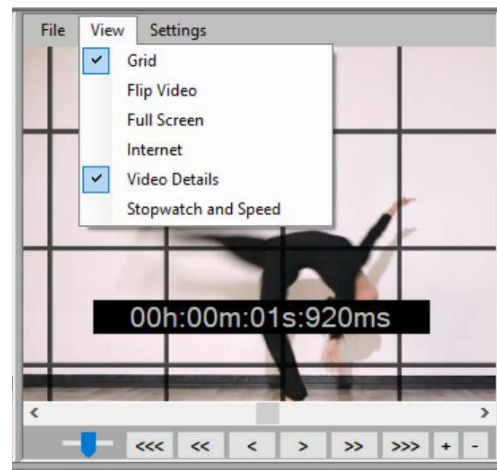
Displays a web browser in the workspace of MotionView™ MotionView.

Video Details

Embeds a time stamp on the video slot.

Stopwatch and Speed

Presents a small text window containing the time and speed information which is normally displayed at the bottom of the software window. The small “Stopwatch and Speed” window can be moved around on the screen so that this information appears on top of the videos you are working with. This is useful when creating A/V Commentaries.



Note: To Deselect any of these settings simply, return to the menu and “uncheck” the desired selection.

Settings Menu

Line Width

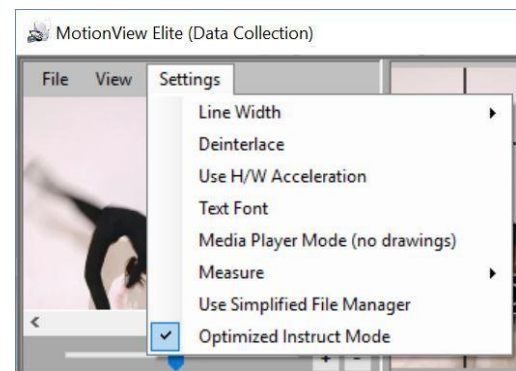
Sets the line width for new lines and shapes.

Deinterlace

Eliminates blurring or ghosting artifacts in video files that are interlaced, such as those captured over firewire or a USB Video Grabber.

Use H/W Acceleration

Enables acceleration features that may be provided by the graphics adapter card in the computer. This setting can sometimes make video playback smoother and clearer. See also [Camera Settings - Use H/W Acceleration](#)



Text Font

Allows user to choose font, size, and color. Note* This will not change the color of the drawing tools.

Media Player Mode

Displays the active video without filtering or using compression, resulting in smoother playback if using HD video or High speed video, while viewing in Media Player Mode drawing tools can not be used.

Measure

The software can measure speed when you specify a “known distance” over which the action occurs (such as a 50 meter dash, the distance from the pitcher's mound to home plate, etc).

See [Measuring Distance](#).

Use Simplified File Manager

Was originally created for users of Bowler's Map™ to switch over to MotionView™. This provides a simplified interface as well as a structure different to that of the normal file manager. Top Level folders can be added but not deleted. Under these folders are Project Folders that contain Active Projects and video files. The user can create, delete, and rename Project and video files. The user also has the capability of selecting which video slot the video file will be loaded in.

Optimized Instruct Mode

This option is checked by default and records video and audio at the same time. When this is unchecked, audio and video are recorded separately and then are merged together in a finalizing stage.

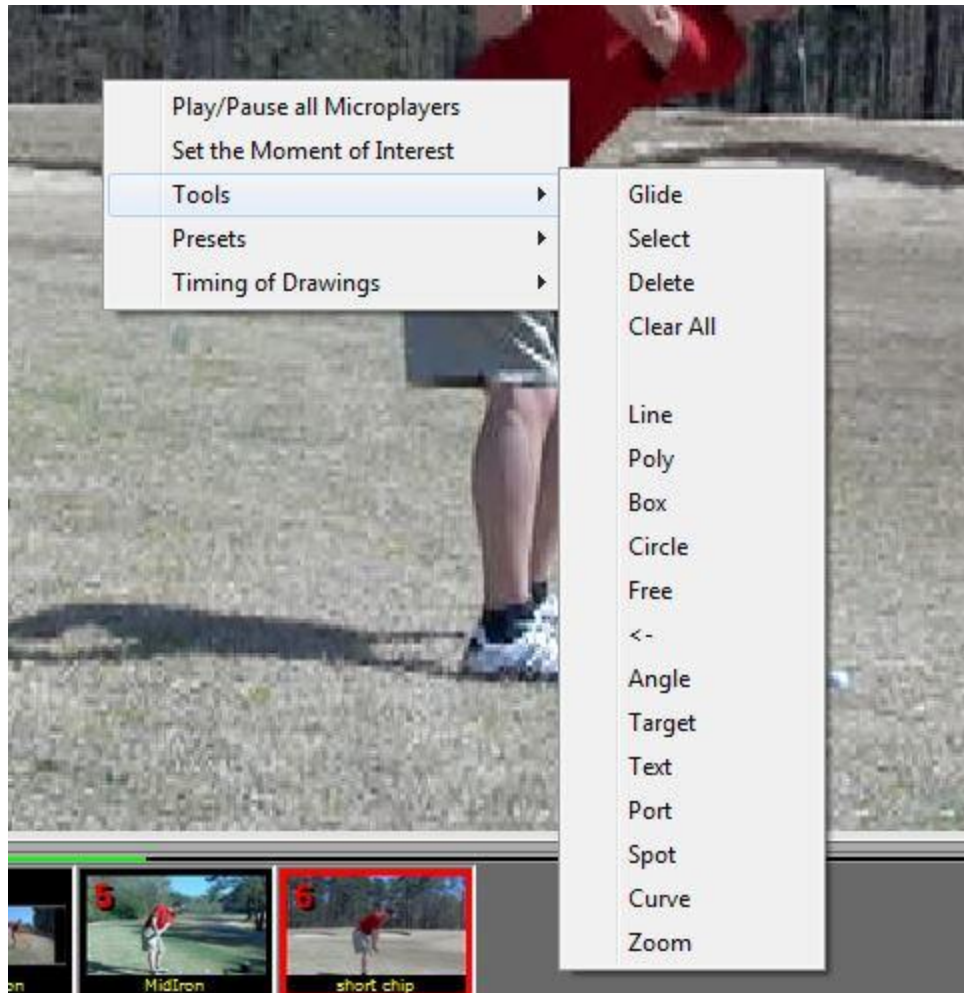
Note: **To Deselect** any of these settings simply, return to the menu and “uncheck” the desired selection.

Context Menu

Play/Pause, Set the Moment of Interest

Each video slot presents a context menu when a right-click on the mouse occurs on the video slot. The context menu provides shortcuts which allow you to control many aspects of the software, such as the current **drawing tool**, **play/pause**, **Moment of Interest**, etc. These can be especially useful when viewing a video slot in full screen mode.

Tools

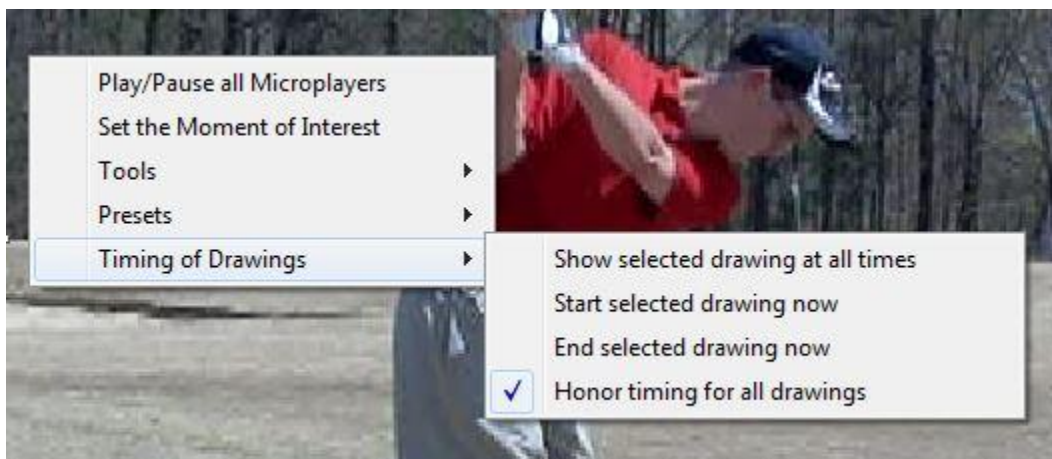


The "Tools" Context Menu

Timing of Drawings

In the Elite edition of the software, all drawing tools are cognizant of time, and will optionally appear on the video at the moment where the video was positioned when you originally drew them. By default the drawings are visible at all times, but this can be changed by instructing the software to “Honor timing for all drawings”. See also [In, Out, and On](#).

Drawings can be individually managed with regard to time by using the “Timing of Drawings” context menu (Right-click on a video slot to display this menu).



The “Timing of Drawings” Context Menu

Drawing timing options include:

Show selected drawing at all times	Instructs the currently selected drawing to remain visible at all times. Use the Select tool to select the drawing before using this option.
Start selected drawing now	Modifies the beginning moment for the currently selected drawing, so that it appears when the video reaches the current position.
End selected drawing now	Modifies the ending moment for the currently selected drawing, so that it disappears when the video passes the current moment.
Honor timing for all drawings	Instructs the software to honor (default) or ignore the individual timing assignments of all drawings. If UN checked then all drawings will appear at all times. This can be useful if you have lost track of the timing assignments for a particular drawing, and you need to see the drawings so as to adjust its timing.

Note that in order to edit the timing of the individual drawings you must first use the “Select” tool. Then choose the drawing you wish to edit by left clicking on it. Then you may right click and edit the timing.

Drawing Tools

Tools Panel

The Drawing tools panel is located on the right side of the work space. First click the tool then click on the video to add that tool to the workspace.



When hovering or clicking a drawing handles to resize or reposition the drawing appear. Click on circle handles to resize or reposition. Click the square handle located in the middle to move it.



LINE



POLY



CURVE



ARROW /
POINTER



POLY+
ARROW



CURVE+
ARROW



CIRCLE



BOX



TARGET



ANGLE
Single Line



ANGLE
Double Leg



FREE
HAND



SPOT



PORT



TEXT



ZOOM



IMAGE OVERLAY



TRAK



STOPWATCH



Poly,



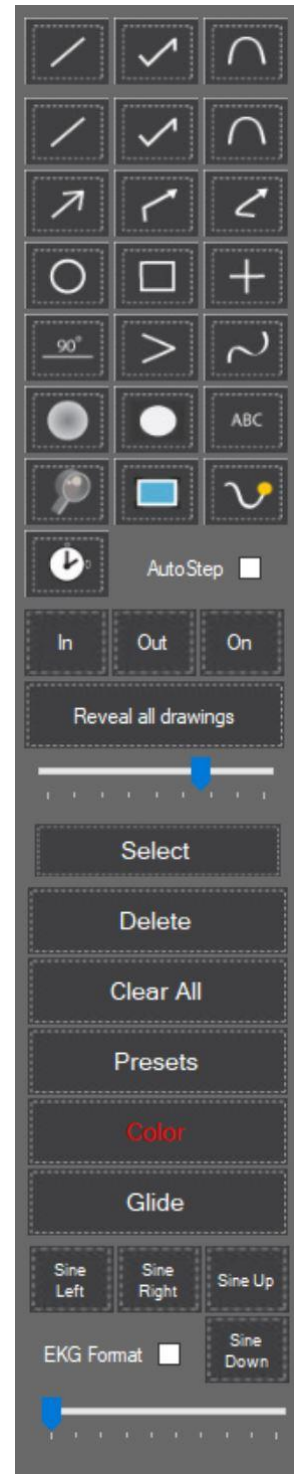
Poly+Arrow,



Curve,



Curve+Arrow



When adding the **Poly** or **Curve** tools click once to start the drawing and **right-click** to complete the drawing. Once completed, when hovering or clicking a drawing handles will appear for resizing or repositioning.



Image Overlay

The **Image Overlay** tool can be used to overlay an image on top of the video. For example, an Axis Tilt & Rotation Chart transparency can be placed over a still capture of a bowling ball with a marked PAP to measure Axis Tilt and Axis Rotation. Right-Click the tool to change the image.



Trak

This tool can Trak moving objects on the screen. See [Automatic Marker Detection and Tracking](#).

AutoStep

Enables all videos to automatically step one frame each time the mouse is clicked. Assists in the creation of animated POLYS.

In, Out, and On

Schedules when the selected drawing is to be displayed. The option to display the selected drawing at all times can be done by selecting the “On” button. See also [“Timing of Drawings”](#)

Reveal all drawings

Displays all drawings regardless of any associated 'In or Out' assignments.

Slider bar

Located beneath the *Reveal all drawings* button the slider bar controls the opacity of the drawings. Slide to the left to make the drawings less visible, slide to the right to make them more solid.

Select

Is used to select drawings for edit or deletion.

Delete

Deletes selected drawings.

Clear All

Deletes all drawing from all video slots displayed.

Presets

Gives the option of selecting a saved drawing. To save a drawing as a preset, right-click any video player with drawings, select preset, save preset drawing. There are 5 slots available for presents. Each present can be given a unique name.

Color

Opens a color dialog window. The newly selected color will be applied to the currently selected drawing as well as to all subsequent drawings.

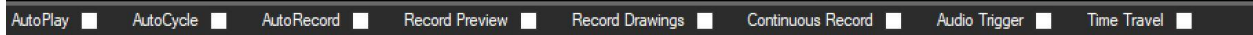
Glide

Causes the video slots to advance forward or reverse as you click and drag the mouse across the workspace (assuming that the video is paused). Drag left-right to move forward in slow motion, or right-left to move backward in slow motion. Drag from the top-bottom to move forward in fast motion, or from the bottom-top to move backward in fast motion.

Sine Left, Sine Right, Sine Up, Sine Down

Set of automated Sine Wave drawing tools. These tools appearing at the bottom of the tool panel, create wave forms based on the relative motion of any single point that can be tracked. You must provide a clearly discernible object in the video for the tracking to work properly. There are 4 sine wave directions, as well as an 'EKG Format' option.

Feature Switches



AutoPlay

Causes the software to automatically begin playback each time a new video file is opened in any video slot. This is a useful feature for hands-free operation. See [Hands Free Recording and Playback](#).

AutoCycle

Causes the software to automatically reverse direction of all video slots during playback when the Begin/End points are reached.

AutoRecord

Causes the software to automatically begin recording from the live video feed when the current video playback reaches the end. This is a useful feature for hands-free operation. See [Hands Free Recording and Playback](#).

Record Preview

The Record Preview feature displays the live video feed on the workspace when recording is taking place. If this is unchecked, the live feed will remain on the thumbnail panel at all times. Having this unchecked allows you to work with existing video files while recording new content at the same time.

Record Drawings

When this feature is active, any drawings displayed in the video slot will be recorded permanently in new recordings. To use these feature note the following:

1. Load a video into a video slot.
2. Turn on Record Drawings, by clicking on the box located on the feature switches toolbar. Note that the camera feed will toggle off and then back on (this is a normal).
3. Add drawing objects to the displayed video.
4. Start a new recording, when recording is completed, the drawings that were active in the video slot will be embedded into the video.

You can also use the Record Drawings Feature to **display drawings over the live video feed** allowing you to use the camera like a mirror while displaying lines, circles, etc. on the live preview. To use this feature note the following:

1. Record a brief video (1 or 2 seconds) with the camera you will be using as the live feed. Or simply load a video that you know was recorded with the camera.
2. Drag the video into video slot #1
3. Turn on Record Drawings (see above).
4. Toggle on Live Preview with shortcut key Ctrl-P or by clicking on the camera icon , located on the main screen at the bottom of the program window (third from the right).



5. You can now view the live feed from the camera and use the drawing tools on the preview. You can resize the objects, move them, etc. As explained above, when **Record Drawings** feature is turned on, drawings made on the screen will be embedded into any new recording. Turn off **Record Drawings** to avoid that from happening.

Continuous Record

Continuous Record is used along with **Record Time**, to continuously record video segments of a set length. Check the Continuous Record checkbox, set Record Time and start recording. Once started this feature will continue indefinitely. To stop continuous recording uncheck the **Continuous Record** check box.

Every time a recording stops, regardless of why it has stopped, MotionView™ will automatically begin to record again. Continuous record can be used to record sporting events for specific time periods such as the quarters in football game. This feature used with Time Travel provides a means to automatically delay playback of live recordings. See Time Travel below.

Audio Trigger

Toggles on/off the Audio Trigger feature. See [The Audio Trigger](#) for details on the use of this feature.

Time Travel

Plays videos in sequential order according to date-time stamp. **Time Travel** used along with the **Continuous Record** and **Record Time** produce a method for creating a delayed playback. For example a coach may wish to have several students line up and one by one each student performs a certain drill. With MotionView™ Continuously Recording (see Continuous Record above) each student is filmed performing the drill. With **Time Travel** and **AutoPlay** enabled, playback can be started after two or three video segments have been recorded (or longer depending on how long of a delay you wish). Videos will then be played back in time order, allowing students to view themselves perform the drill on this time delayed playback while video recording continues. In this scenario, it is best to have the video playback in real time (not slow motion), otherwise the time delay will increasingly become longer.

Sound

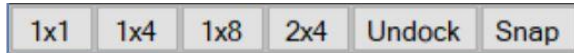
If video has sound, controls whether audio is heard when played back. Video must be played at full speed. To the left is a slider to control volume.

Tips

Enables or disables the automatic display of helpful tips when the mouse hovers over a button, check box, or other features.

Function Bar

The Function Bar is located just below the Feature Switches. The first 6 buttons relate to control of video slot layout as described below:



1x1

Closes all video slots except #1.

1x4

Displays the same video in 4 video slots, each playing one frame ahead of the previous. This will provide a strobed effect, providing 4 different frames of the same video in sequence across the work space. To use this feature first select the 1x1 button, load a video into video player #1, and then select 1x4. Select the play button. At any time during the playback press pause to see multiple frames of the video each one frame ahead of the previous. TIP: To step through frame by frame use the keyboard right/left arrow keys while the video is paused.

1x8

This function is the same as 1x4 except that it will load the same video in 8 video slots (see image above), thus providing 8 different frames of the same video in sequence across the work space each one frame ahead of the previous.

2x4

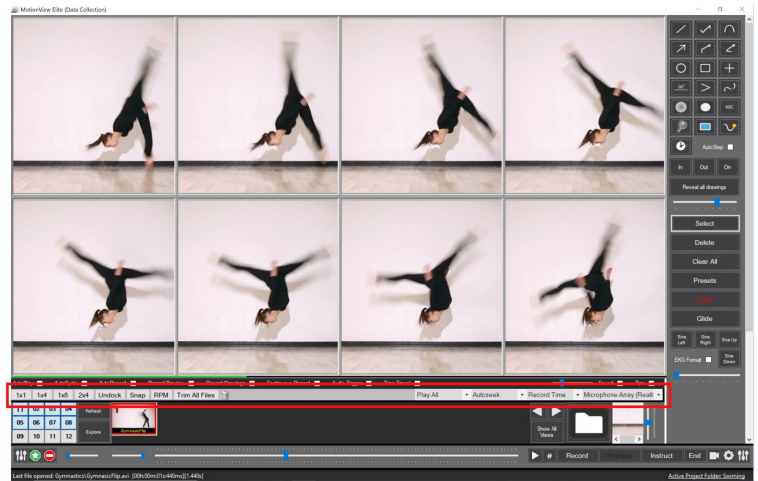
This function is similar to 1x4, however it allows a comparison of two different videos to be played back one frame ahead of the previous. One video will play back in video slot 1 through 4 the second video will play back in slots 5 through 8. To use this feature first select 1x1 button and load the first video into slot #1, Next open and load a second video in slot #5. Now select the 2x4 button. Select play button. At any time during playback press pause to see multiple frames of the two videos displayed in sequence.

Undock

This will undock all video players allowing user to resize/place video players anywhere on the screen.

Snap

Snap will automatically arrange video slots in the available work space. This is the default setting used by MotionView.



The next three items on the Function Bar are described below...



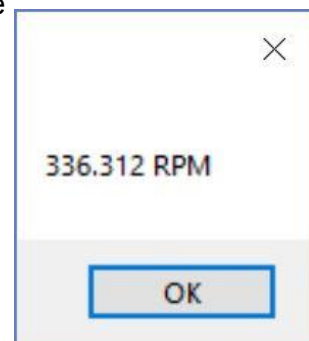
RPM (Revolutions Per Minute)

The RPM operation performs a measurement of Revolutions Per Minute using the Angle tool. MotionView™ can measure the RPM's of any object that displays a clear rotation. For best results we recommend filming from an angle that is perpendicular to the spinning object (bicyclist, bowling ball, etc).

To perform an RPM measurement:

1. Pick a point on the edge of rotating object, using the ANGLE tool mark this point with one leg of the angle.
2. Advance the video one frame forward and set the other leg of the angle to the same point, which will now have moved. The faster the rotation the greater that movement will be.
3. Press the RPM button.

The RPM measurement is based on the angle created between two consecutive frames of video.



Draw one leg of the angle on any frame of video.



Draw the second leg exactly one frame later.

Press the RPM Button.

Trim All Files

This operation trims all files to the range specified by the Begin/End moments. **Note* This is irreversible and affects every video file opened in the work space.** To trim only one video file, see [Trim Current Video](#).

Trash Can

Drag and drop thumbnails on the Trash Can to delete the associated video file(s).



The remaining items on the Function bar are described below..



Play All/Skip Frame

This operation causes the software to skip frames during playback. This is useful when working with high speed photography, this speeds up the progress of the video by ignoring a certain percentage of the recorded frames.

AutoSeek

The AutoSeek operation causes the software to automatically “skip forward” to the last few moments each time a video is opened. Select the number of seconds before the conclusion of the video from the drop down list to enable this feature. The software will automatically adjust the Begin Moment so that only the selected number of seconds are displayed at the end of the video file. This is a useful feature for hands-free operation. See [Hands Free Recording and Playback](#).

Record Time

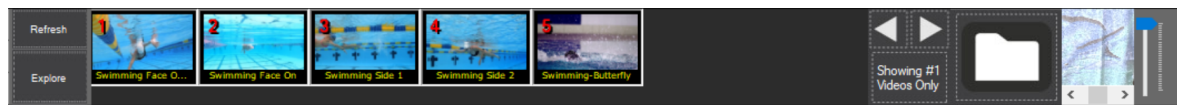
This operation automatically stops live recording sessions after the specified time has elapsed.

Microphone

The Microphone dropdown selects the microphone input to be used when instructing.

Thumbnail Panel

The Thumbnail panel displays a small preview image from



each video that is located in the Active Project Folder. You can 'drag and drop' thumbnails onto [video slots](#) to open a video. By default when multiple cameras are connected, only #1 videos will be shown in the thumbnail panel, all other videos will be hidden. When the first video is loaded into slot #1, all other videos will automatically be loaded to slot #2, #3, etc, depending on the number of videos. Clicking the [Showing #1 Videos Only](#) button will reveal all videos. See also [File Management](#). Thumbnails with Red numbering are single view videos. Yellow numbers indicate multiple views are present.



right-click on a thumbnail for additional options... open, delete, rename or share.



double-click a thumbnail and it will automatically load to first video slot

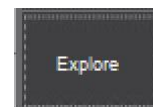
Refresh

rebuilds the thumbnails based on the video files in the current folder.



Explore

opens Microsoft File Explorer (Opens to the same file folder currently be shown in Thumbnail panel.)



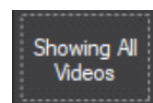
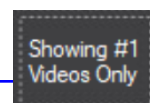
Arrow buttons

to the right of the Thumbnail panel arrow buttons will load the previous or next video according to the date/time stamp of the recording.



Showing #1 Videos Only

When this button is clicked it unhides additional videos when multiple cameras are in use. Text will change to Showing All Videos. When all videos are shown they will not automatically load as described above. To return to Showing #1 Videos Only select the button again.



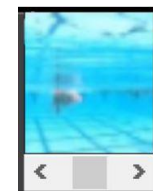
Video Manager Button

The file folder button, opens Video Manager (Elite Version only). See [Video Manager](#) for more information.



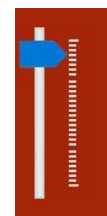
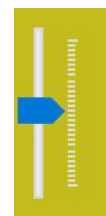
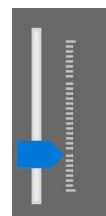
Camera Preview

shows preview of connected video feeds.



Playback Speed Control:

The vertical slider bar controls the playback speed of all video slots. When analyzing video with higher frames rates you may notice that the playback speed bar will change to yellow and eventually to red as the playback speed is increased. With high frame rate videos lower playback speeds result in smoother video playback.



ToolBar

The ToolBar is always present at the bottom of the work space. The left side of this bar contains the following controls described below:



Show/Hide Controls

Left show/hide control hides or reveals Feature Switches, Function Bar and Thumbnail Panel to provide more vertical screen space for the video players.



Begin/End Moment Buttons

Green octagon sets the Begin Moment (F1), Red octagon sets the End Moment (F2). See [Setting the Begin and End Moments](#)



Begin/End Moment Sliders

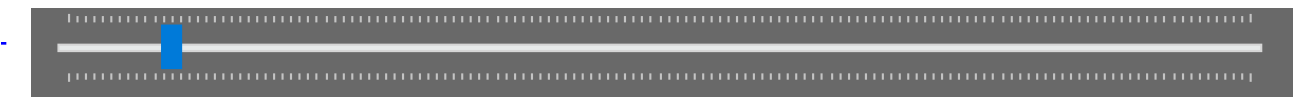
Use Left slider to set the Begin Moment (F1)
Use Right slider to set the End Moment (F2)

See [Setting the Begin and End Moments](#)



Main Slider

Main slider bar shows playback progress. All video slots will start at the same relative position from the Begin moment. Use slider to move forward and backward. The tick marks on the above and below are a graphical representation of the frame count.



The right side of the ToolBar contains the following controls, each are described below:



Play/Pause

Play or pause all videos (space bar)



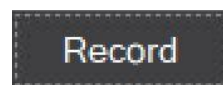
Adjust Moment of Interest

When the '#' symbol is showing and video playback is paused the LEFT and RIGHT ARROW KEYS will advance all videos together, either forward or backward one frame at a time. Clicking the '#' symbol will change it to a number corresponding to a video player. The LEFT and RIGHT arrow keys will now advance 'The Moment of Interest' forward or backward only for the selected video slot. Clicking another video slot will switch control. When the moment of interest is set for each video all videos will reach the set moment at the same point during playback. See also [The Moment of Interest](#).



Record

Starts and stops video recording from live video feeds.



Replace

Automatically deletes the most recently recorded video and then starts a new recording. This is a handy way to keep your folder from getting clogged with video files during a lengthy recording session.



Instruct

Starts or pauses Audio/Video commentary recorder session. See [Instruct Feature \(for creation of instructional videos\)](#).



End

Ends Audio/Video commentary recorder session. See [Instruct Feature \(for creation of instructional videos\)](#).



Camera Preview

The Preview operation switches the live camera feed from small preview windows to the workspace.



Camera Configurations

Select cameras for live video feed. See also [How to configure a live-feed camera](#)



Show/Hide Controls

Right control shows/hides the the Drawing Tools to provide more horizontal screen space for the video players.



Status Bar

At the very bottom of MotionView™ is a status bar providing information about the currently loaded file and current settings of MotionView.



The left side displays information about the last loaded video and during file conversion it will display the progress of the converted file. The current status of the Audio Trigger is also displayed when this feature is in use.

Last file opened: Gymnastics\GymnasticFlip.avi [00h:00m:02s:80ms][2.080s]

The right side displays the Active Project folder.

Active Project Folder: Gymnastics

Shortcuts

<u>Set Begin/End Moment</u>	Begin Moment F1 or “Ctrl B”	End Moment F2 or “Ctrl E”
Adjust Begin/End Moments: Adjust Backward 10 Seconds Adjust Backward 1 Second Forward 1 Seconds Forward 10 Second ---- *Adjust Backward 1 frame *Adjust Forward 1 frame	Begin Moment Ctrl F9 Ctrl F10 Ctrl F11 Ctrl F12 ---- Ctrl Left Arrow Ctrl Right Arrow	End Moment Ctrl Shift F9 Ctrl Shift F10 Ctrl Shift F11 Ctrl Shift F12 ---- Ctrl Shift Left Arrow Ctrl Shift Right Arrow

*Only when video is paused. During playback reverses direction of video.

<u>Seek/Change Direction:</u>	BACKWARD	FORWARD
Steps video 1 frame	Left Arrow Key	Right Arrow Key
Jump by 10 seconds	F9	F12
Jump by 1 second	F10	F11
**Reverses playback direction	Ctrl Left Arrow or Ctrl Shift Left Arrow	Ctrl Right Arrow or Ctrl Shift Right Arrow

**Only during playback, if video is paused adjusts the begin/end moments by 1 frame.

<u>Record, Playback, Preview:</u>	Shortcut
Begin / End recording live video	F5 or ‘Ctrl +’
Begin / Pause Instructional Recording	F6
Play / Pause video playback -or- End Video Recording	Space
End Video Recording	F5 or ‘Ctrl +’ or Space or Escape
Playback Speed (only during playback)	Ctrl + Up Arrow (faster) Ctrl + Down Arrow (slower)
Toggle AutoRecord checkbox	Ctrl R

Toggle AutoPlay checkbox	Ctrl L
Toggle Audio Trigger checkbox	Ctrl G
Toggle Live Preview of Video Feed on Workspace Note: Will not work while text tool is open	Ctrl P

<u>Drawings</u>	Shortcut
Clear all drawings from all players	Ctrl Delete
Copies the drawings on the active video slot (the last video slot to receive a mouse click) to the clipboard as a bitmap picture. You can paste the picture into any program capable of receiving a bitmap (Paint, Word, etc). This allows you to capture an image showing the <i>drawings only with no video content</i> .	Ctrl C
Start Automatic Marker Detection and Tracking	Ctrl T
<u>Data Collector</u>	
Show the Scenario Description Form	F3
Add a new row to the Scenario Table	F4
<u>Camera/Video Slots</u>	
Pans Camera Up/Down/Left/Right (Num Lock must be off)	Number Pad Arrow Keys
Zoom larger (+) or smaller (-)	+ and -
Display information about the active video player (displays information from the last video clicked on)	Ctrl i
<u>Text Logger</u>	
Show/Hide Text Logger [for debugging only]	Ctrl ?
<u>Thumbnail Panel</u>	
Load Video to Video Player #1	Double Click Thumbnail
Open, Delete, Rename, or Share... a video	Right-Click Thumbnail
Delete Video	Drag and Drop on trashcan

Video Capture

Camera Connection Types

Gigabit Ethernet (GigE) Cameras

Like [USB3.0 cameras](#), GigE cameras can provide high frame rates for live video capture. In addition, they permit cable lengths of up to 300 feet and longer. These cameras connect over a CAT-5E ethernet cable to a dedicated GigE port in your computer. These cameras also require a separate power source.



A typical GigE camera

USB 3.0 Cameras

USB 3.0 cameras draw power from the USB 3.0 port in your computer. A SuperSpeed USB 3.0 port is required. These cameras do not require a separate power source. Generally speaking, USB 3.0 cameras support cable lengths of 10-15 feet, although powered extension cables are available for longer distances.



A typical USB 3.0 camera

Still Shot Cameras

A “still shot” or video camera that connects using USB will usually NOT provide a live video feed to the computer. Instead, these cameras store video recordings in their internal memory as compressed files. The USB connection allows you to browse for and open the video files much the same as you would do when opening a file located on a computer hard drive.



A Typical Still Shot Camera

Live video capture directly into the software is usually not possible with these cameras.

Camcorders with a Firewire Connection

Video camcorders with a Firewire connection (also referred to as a 1394 port) provide a live video feed into the software, and also allow the software to control the tape mechanism within the camera (play/pause/rewind/fast forward).

High Definition video cameras with a Firewire port usually deliver live video only in standard video format over the Firewire port, not in HD.

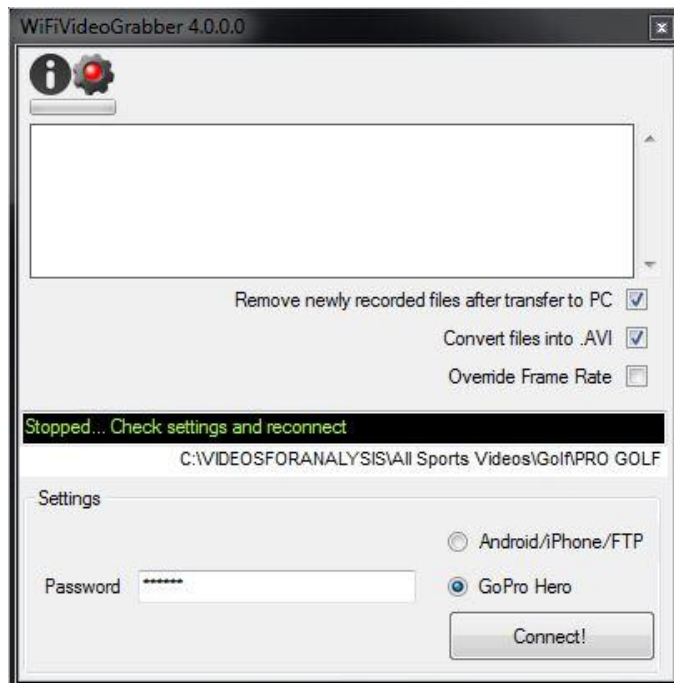


A typical camcorder with firewire.

WiFi Video Grabber Software for Intelligent Cameras

Our WiFi Video Grabber is an optional software that can automatically retrieve video files from a GoPro® Hero 3, a GoPro® Hero 4, a smart phone, an iPad or Android tablet

immediately after each new recording. New video files arrive inside MotionView™ within seconds of the recording! In supported devices, such as the GoPro®, the WiFi Video Grabber can also start and stop video recording wirelessly. For step by step instructions to configure the WiFi Video Grabber see [video tutorials](#) link at the bottom of www.allsportssystem.com home page, videos #12 through #14.



High Definition Video Recording

High Definition video recording is possible with the appropriate hardware, such as an HDMI or Component Video Capture card or adapter.

Analog Video Recording

Almost all older video cameras provide an Analog Video signal (the same signal used to view the video on a television). A USB Video Capture Device such as the one shown below accepts analog video as an input, and converts it into a digital video feed available directly to the software.

With such a device live and prerecorded video can be recorded from almost all video camcorders, DVD players, VCR's, and TV Tuners.



A typical USB Video Capture Device


How to configure a live-feed camera

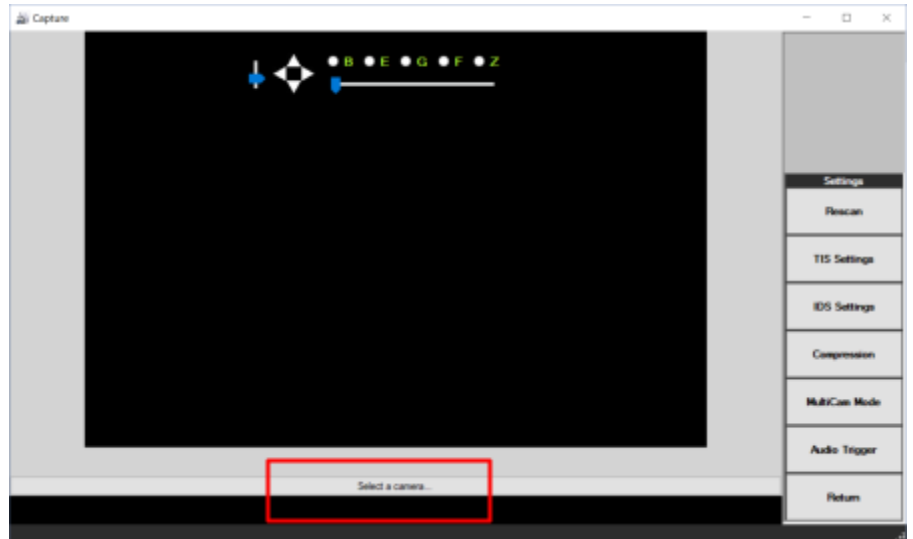
The following describes the typical steps to select and configure a live-feed camera (USB 3.0, GigE, Firewire, USB Video Grabber, etc.).

Connect Camera

Connect the camera to the computer, turn the camera on, and place the camera in “Live” video mode if necessary and Launch MotionView™.

Camera Configurations

Click the **Camera Configurations** button  located on the [Toolbar](#). If MotionView™ was already opened when you connected the camera press [Rescan](#) - this will instruct MotionView™ to search for connected cameras.

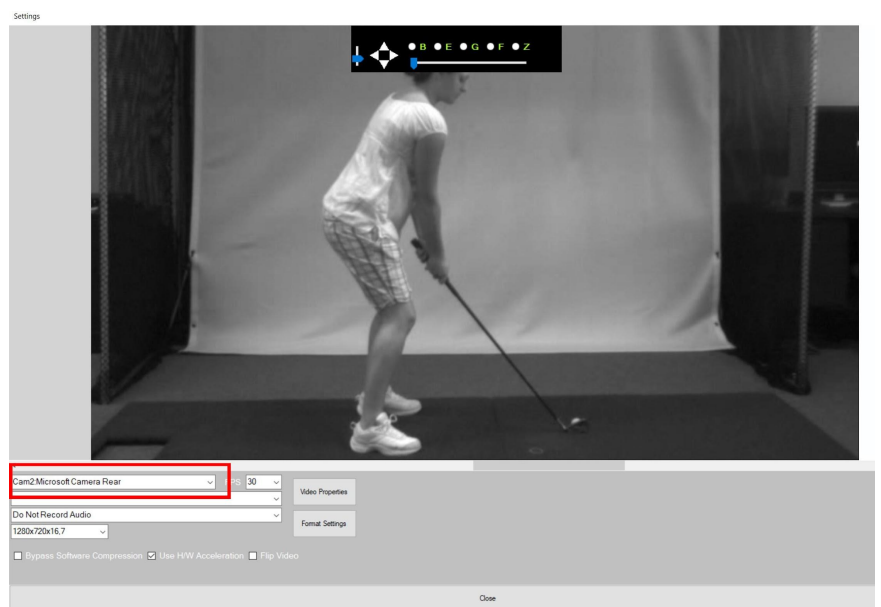


Select Camera

At the bottom of each camera slot is the **Select a camera...** bar. Use this bar to open the **Camera Settings Window**. In [MultiCam Mode](#) you will see two or more camera slots with a select camera bar for each slot.

A settings window will open, the first drop down box will contain a list of live feed video devices connected to the computer.

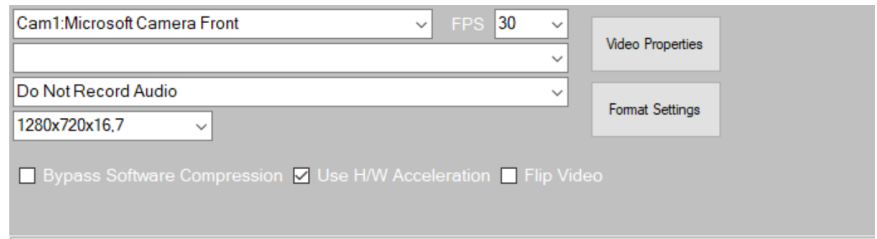
Select the device you wish to use from the drop down list. The live video feed will now be displayed.



Camera Settings Window

FPS

Adjust the FPS (Frame per second) setting using the drop down box provided.



Source

The dropdown selector directly below the live feed camera selector functions only with certain devices or video capture cards where more than one output source is available. When active, select the appropriate source based on your connection type.

Microphone

If a microphone is present on the camera you can set to record audio from it.

Resolution

of the video can be adjusted.

Bypass Software Compression.

Select checkbox to bypass software compression on a per-camera basis.

Note: If you elect to bypass software compression the resulting video files will be very large, but sometimes this is the only way to capture truly high speed video without dropping frames. You can compress the video after it has been captured by means of the “Trim All Files” button.

Use H/W Acceleration

Hardware acceleration is where certain processes - usually 3D graphics processing - is performed on the graphics card (the GPU) rather than in software on the main CPU. In general you should always enable hardware acceleration as it will result in better performance. See also [Settings Menu - Use H/W Acceleration](#).

Flip Video

If the image from your camera is upside down check this box to rotate the picture.

Video Properties and Format Settings

These buttons can be used to access Internal camera settings (gain, shutter speed, etc) on many cameras.

Close

Exits the camera selection dialog by clicking **Close**, or by pressing the **ESC** key.

Return

Press the **Return** button or the **ESC** key to return to the main workspace. On the main workspace you will now see a small preview of your live video feed near the File Manager button.

Note: The selected camera and settings will be remembered by MotionView™ so that future sessions will automatically configure the camera for you.

Change Brightness, Exposure, Gain, Focus and Zoom

At the top of each live video preview is a **Camera Settings Panel** to control Brightness, Exposure, Gain, Focus and Zoom. Focus and Zoom only function on cameras that support control of these functions. This panel is visible on the [Camera Configurations](#) window, or when previewing live video on the Main Workspace this panel will appear as your mouse is pointed to the top of the video slot containing the live feed.

Select the radio buttons for each control and then use the slider bar to change that particular settings. See diagram below.

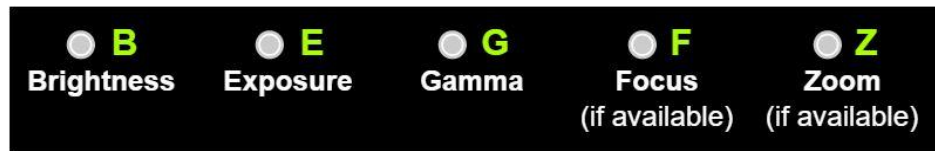
Camera Settings Panel

The vertical slider bar controls the speed at which the camera pans/tilts.



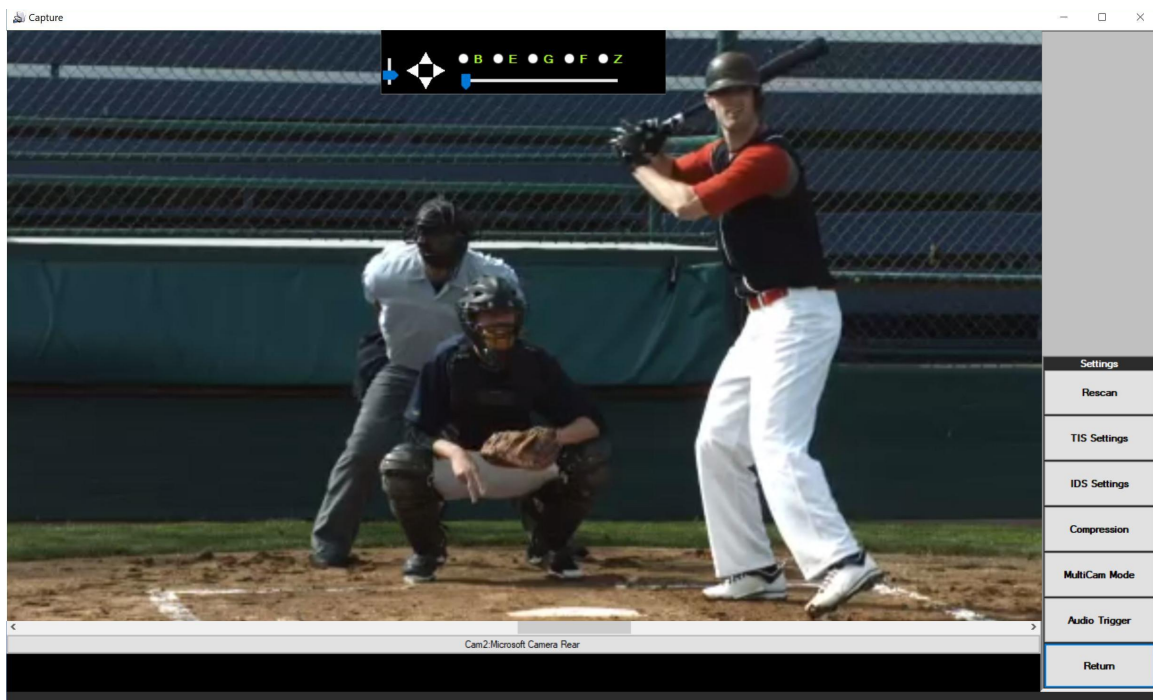
Pan Tilt Triangles: Click a triangle to pan or tilt.
The horizontal slider bar adjusts the currently selected setting.

Key to radio button controls:



Camera Settings Bar

To the right of the [Camera Configurations](#) window is a **Settings Bar**. Each button is described below.



Rescan

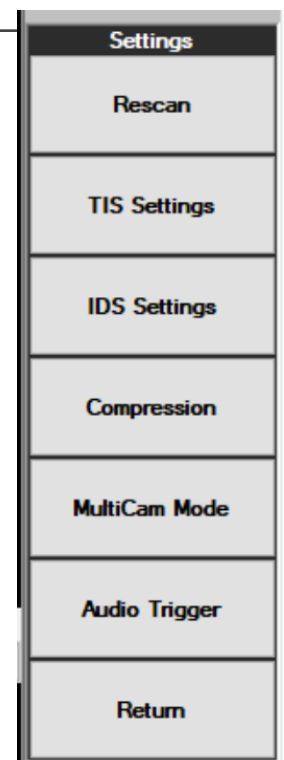
This button will disconnect and rescan all available cameras on the system. If you previously had a camera connected and it now is not displaying using this button may help to reconnect your cameras. After rescan each camera will need to be selected using the **Select a camera** bar beneath each camera slot.

TIS and IDS Settings

The **TIS** and **IDS** Settings buttons are to make changes to cameras settings for specific models of live feed cameras only. These buttons will only function with these specific models of cameras.

Return

This button (or Esc) will close the Camera Configurations and return to the Main Work Space.

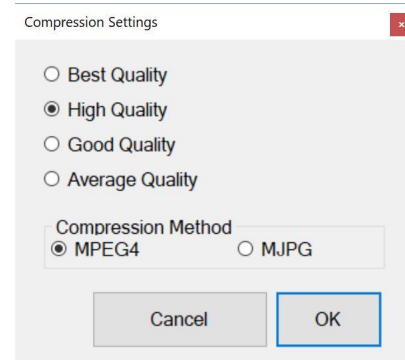


Compression

Adjusting the compression settings may permit a higher frame rate during live video recording by adjusting video quality.

It is also possible to bypass software compression altogether, on a per-camera basis. A checkbox for this can be found on each Camera Settings panel.

Video Compression settings can be used to help manage the limited system resources of computer hardware. The hardware and processing speed of your computer are key factors in the ability to record high quality video while maintaining the desired settings of other key factors for video recording such as frames per second.



MultiCam Mode

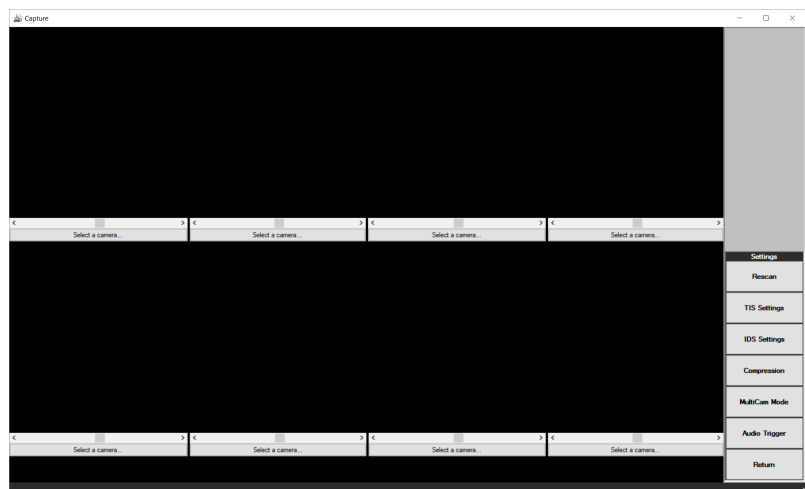
Use the **MultiCam Mode** to open up two or more camera slots for simultaneously recording of multiple views.

MotionView™ Basic and Elite each include two cameras slots.



Elite is upgradable to up to 8 camera feeds.

Upgrades available from www.allsportsystems.com

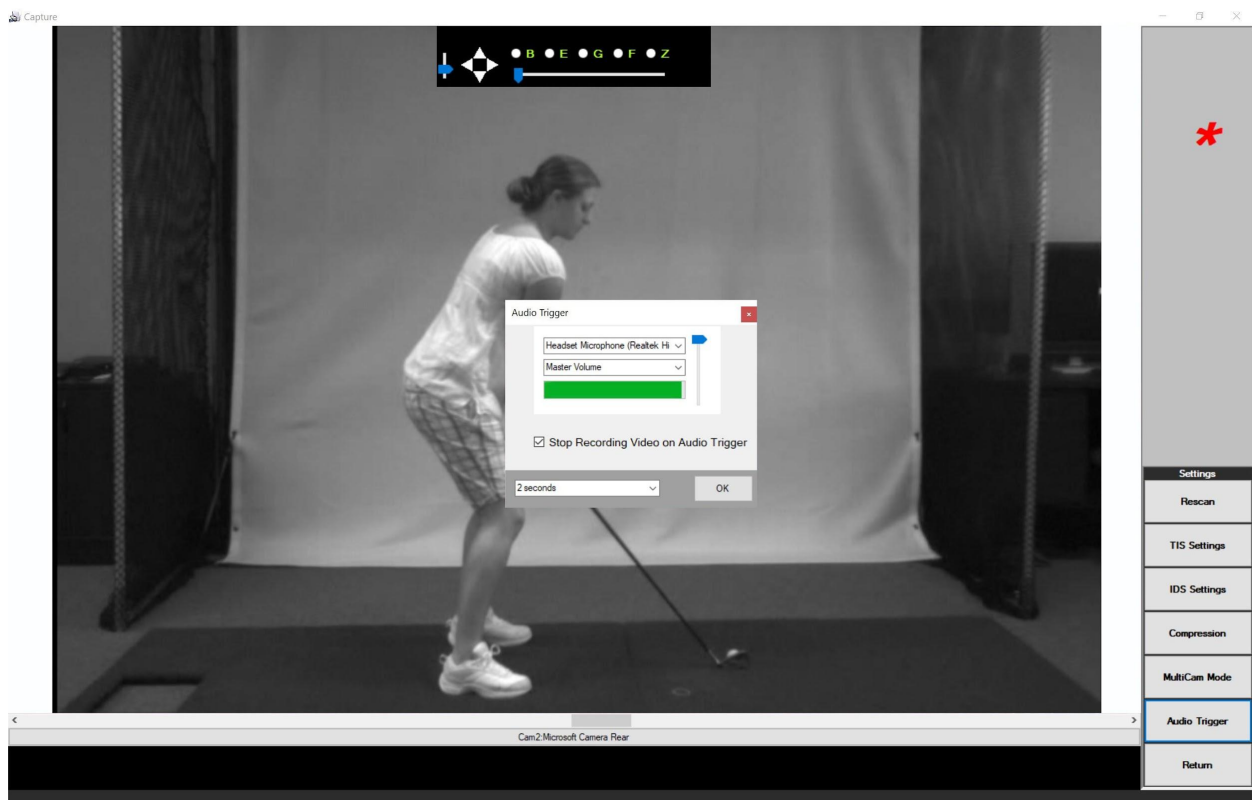
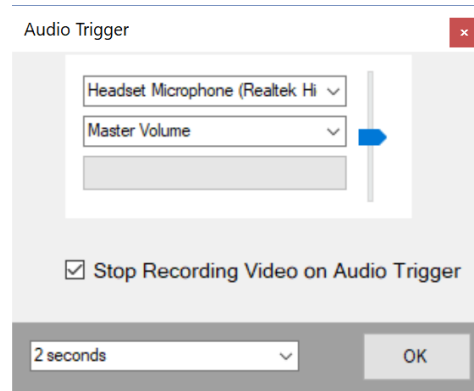


The Audio Trigger

The Audio Trigger feature enables the software to detect a loud noise such as a ball strike, and to automatically stop recording from the lived feed video at a predetermined moment thereafter. Your PC's microphone should be placed as near as practical to the sound source. Click the [Camera Configurations](#) button located on the [Toolbar](#) to access Audio Trigger settings.

On the Audio Trigger window, select the appropriate Microphone from the first drop down list, and then check **Stop Recording Video on Audio Trigger**. Audio Trigger can also be toggled on/off from the [Feature Switches](#) bar.

The slider bar on the right controls the input volume of your microphone. You will notice that a large red asterisk (*) will appear on the right hand side of the screen each time the audio trigger detects a noise loud enough to trigger it. Finally, select the number of seconds to record after the trigger occurs. Using this feature with the AutoRecord and AutoPlayback features can allow for a completely hands free recording and playback. See [Hands Free Recording and Playback](#).



File Management

The software automatically creates the following file structure on your hard drive:

C:\VideosForAnalysis

This is the root folder under which **all video files created by the software will be stored initially**. You can create additional folders below this one to further organize your videos by subject, event, name, date, etc.

C:\VideosForAnalysis\Captured Videos

This folder receives all new video recordings captured from a live video feed. Examples would include recording from a GiGE camera or a USB camera. This can be overridden by Right-Clicking on any folder and choosing the menu item "Set as Active Project".

C:\VideosForAnalysis\ClipArt

This folder contains .png graphics files which can be used the same as the internal drawing tools.

C:\VideosForAnalysis\Thumbnails

This folder contains .jpg thumbnail pictures automatically created by the software as you open video files during each session. Old thumbnail pictures are automatically deleted after 100 days. If you delete the files in this folder then new thumbnails will be created the next time you use the software.

Video Naming

All new recordings created by MotionView™ from live feed cameras will be saved to the [Active Project](#) Folder. MotionView follows the following naming convention when saving the video file.

ActiveProjectFolder-CAM[1]-[DATE]-[TIME].avi

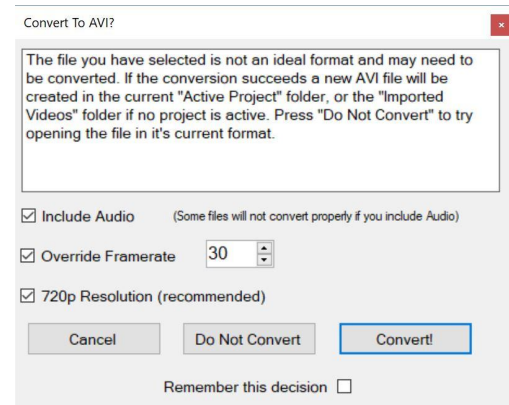
When multiple cameras are in use each file will be named as CAM1, CAM2, CAM3, etc. This allows MotionView to identify synchronized videos and load all camera views automatically. When renaming a file from the [Thumbnail Panel](#) or [Video Manager](#) only the leading text of the video file can be changed.

Video Deletion

Video files can be deleted from the [Video Manager](#) or directly from the [Thumbnail Panel](#) by right-clicking the thumbnail. When CAM1 video files are deleted, all matching camera videos (CAM2, CAM3, CAM4, etc.) are likewise deleted. If you have [Show All Videos](#) enabled you can select and delete CAM2, CAM3, CAM4, etc. videos individually without affecting any other videos. However, whenever a CAM1 video is deleted from the Thumbnail Panel or the Video Manager, whether or not Show All Videos is enabled, all additional camera videos detected are automatically deleted at the same time. The only way to delete CAM1 videos, without deleting the additional videos is to use Windows Explorer. Use the [Explore](#) option on the [Thumbnail Panel](#) to go directly to the file folder on your computer and selectively delete videos.

File Conversion

If you open a file that is in a format *other than* those internally supported, MotionView™ will ask whether you wish to convert the video into .AVI format. If you elect to convert the file MotionView™ will attempt to create a new .AVI file, placing it in the [Active Project](#) folder. The new .AVI video can then be opened, deleted, renamed, or moved into a new folder. MotionView will append the phrase “-Converted” into the file name of any converted file and will no longer prompt to convert that file.



Include Audio checkbox

Some files will not convert properly if you include audio. You may wish to leave this option unchecked unless audio is absolutely needed.

Override Framerate setting

The File conversion prompt offers the option to override the reported frame rate in source files. This is needed because many cameras (such as GoPros) declare a frame rate of only 30FPS in every file, even though the video is captured at much higher speeds. This feature allows you to set the correct frame rate during file conversion of such video files, which can then be used for accurate timing during playback.

720p Resolution checkbox

By default, MotionView prompts for video conversion any time it encounters a video file with a resolution higher than 1280x720. There are, however, scenarios in which you may want to convert a file (from deeply compressed MP4 into lightly compressed AVI for instance) without reducing the video resolution. To convert the file without changing the resolution, uncheck the 720p Resolution (recommended) checkbox.

Remember this decision checkbox

Multi-camera systems can automatically convert all camera output files after each capture. This especially benefits multiple IP camera systems, streaming in MP4 format. MotionView can automatically convert all of the deeply compressed MP4 files into AVI files after each recording, without prompting for each file.

Working With Quicktime and 3GP Videos

The software includes support for Quicktime (.MOV) and .3GP video files formats. In order to work with .MOV or .3GP files you must install the free Quicktime Player from the Apple website:

<http://www.apple.com/quicktime/>


After installing the free Quicktime Player you will be able to preview, open, and work with .MOV and .3GP files just the same as .AVI files.

MP4 Files and The Haali Media Splitter

MotionView™ can display .MP4 and .MTS videos (also called AVCHD), so long as you have the free Haali Media Splitter software installed. This software is available at:

[MatroskaSplitter installer \(https://haali.su/mkv/\)](https://haali.su/mkv/)

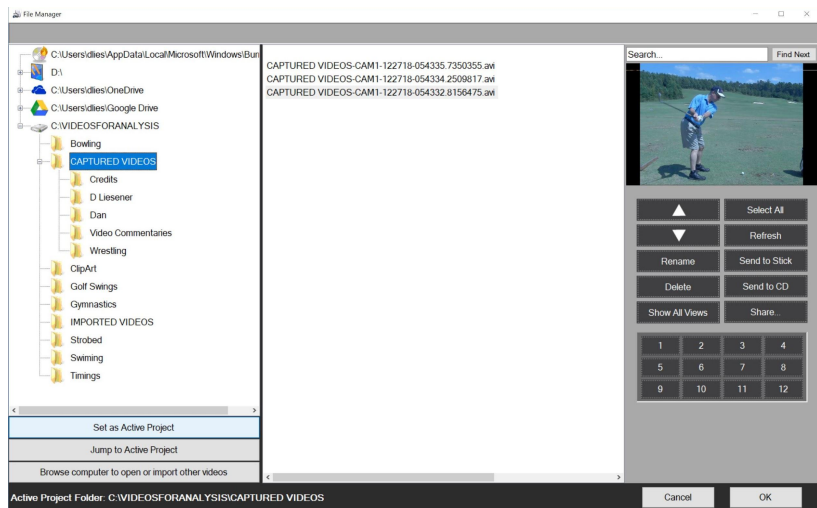
Video Manager

The Video Manager (Elite edition) can be accessed from file folder icon  on the [Thumbnail Panel](#) and provides convenient access to your video files.

The Video Manager allows you to organize videos in folders, create/delete/rename video files and folders, browse for videos on your computer, and search for videos by any part of their name.

Search

Use the search box to search for files by name.



Right-Click

Right-click on any folder or video file to see a menu of options available for file management, or use the large buttons as shown.

Preview

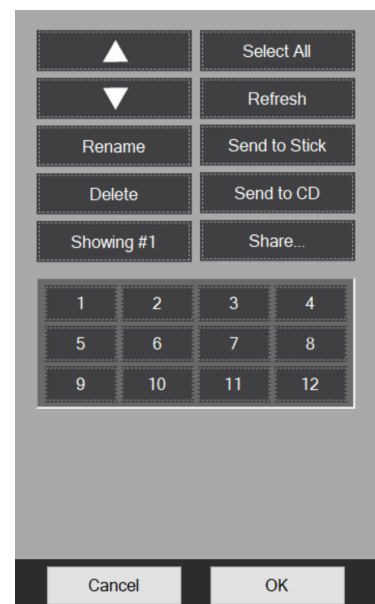
Preview of the currently selected file is automatically displayed in the top right corner of the Video Manager. The preview will be displayed only if the file is supported by the software natively (i.e. with no need for conversion).

Select All, Refresh, Rename, Delete, Share

There are several controls to the right of the manger to perform various actions. **Select All**, selects all files, **Refresh**, refreshes the current folder. If you have a file or files selected you can **Rename**, **Delete**, or **Share...** those files using the appropriate button. **Arrow buttons** will move your selection up or down the list. See also [Video Deletion](#).

Showing #1 [Default]

By default only CAM1 videos are visible in video manager. This button will toggle between viewing only videos from CAM1 to viewing all videos when multiple cameras are in use. Text of button will change between **Showing #1** (videos) to **Showing All** (videos) to indicate the currently selected view. See also [Video Deletion](#).



Set as Active Project, Jump to Active Project, Browse

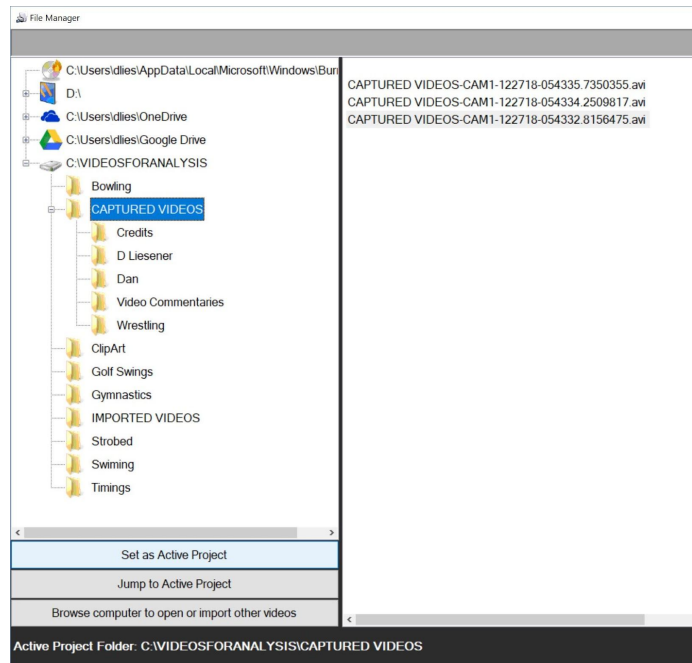
By default new video files are stored in the folder **C:\VideosForAnalysis\Captured Videos**.

You can override this by selecting a different folder and then clicking the **Set as Active Project** button, or you can RIGHT CLICK on any folder and use the menu item '**Set as Active Project**'.

Use **Jump to Active Project** to display current active project folder.

The **Browse computer to open or import other videos** will open Windows® file explorer to locate folders and files stored elsewhere on the computer.

The currently active project will always be displayed on the [status bar](#) at the bottom of the MotionView™ window.

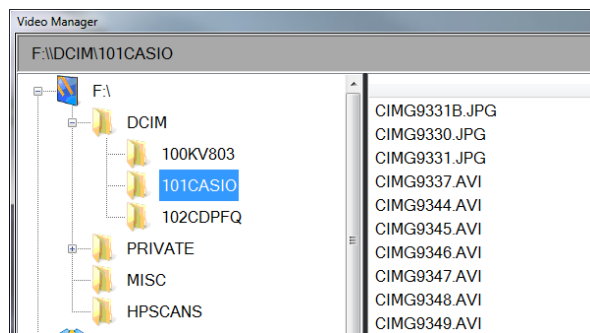


Working with Memory Sticks and USB Connections

The Video Manager makes it easy to work with video files on memory sticks (such as those used in digital still-shot cameras). When you insert a memory device into your computer, or connect a USB cable to a digital still-shot camera, the Video Manager will automatically display a special icon (see above) for the memory stick, allowing you to browse the memory.

In the example, a memory stick has been plugged into the system and is using drive letter F:

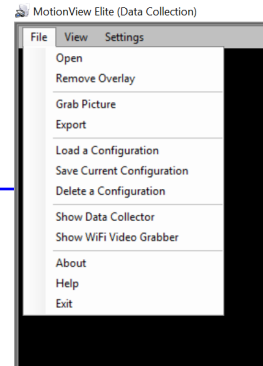
You can easily place video files on the memory stick by “Dragging-and-Dropping” the files onto any folder within the memory stick. This is a convenient way for you to deliver Instructional videos to your students, as well as to share video clips with others.



Note: When a file is dragged ONTO a memory stick, a copy of the file is made, and the original file is left in place on your hard drive. The same is true when dragging files FROM a memory stick onto your hard drive: the file is COPIED not MOVED.

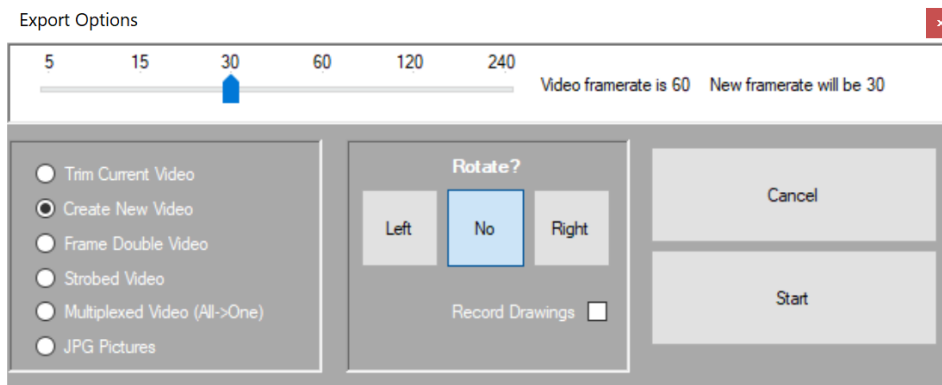
Exporting Video Files

From the file menu of any video slot is the **Export** feature. Each feature on the Export Options Panel is described below.



Export Options

The Export feature allows you to trim (shorten) video files, create new video files, or produce a series of JPG picture files from any video that you have opened in a video slot. The Export Options Panel, shown below, provides access to a number of options which can be applied to the files you export:



The Export Options Panel

Trim Current Video

Cuts the video file down to the current **Begin/End Range**, as specified by the [Begin/End Moment Buttons](#) on the [Toolbar](#). The end result is that the video file is shorter and all video content that is outside the **Begin/End Range** is deleted. You cannot modify the speed or orientation of the video file when trimming, nor can you embed drawings.

The software can TRIM files that are in .AVI format only. If you are working with a file in a different format (.MOV for instance), then the TRIM option will be disabled. In this case, use the **Create New Video** option instead. This will create a new file in .AVI format as described below. You can then delete the .MOV file if it is no longer needed.

To trim all videos open on the work space see [Trim All Files](#).

Create New Video

Produces a new AVI video file. The new video file will contain only the video within the **Begin/End Range** as specified by the [Begin/End Moment Buttons](#) on the [Toolbar](#).

The original video file is not altered. You can modify the full speed playback rate of the new video file using the Framerate slider bar. You can also rotate the images inside the video left or right, which is helpful when working with videos from an iPhone or Android device.

Finally, you have the option of embedding the drawings in the new video file, so that these become a permanent part of the video.

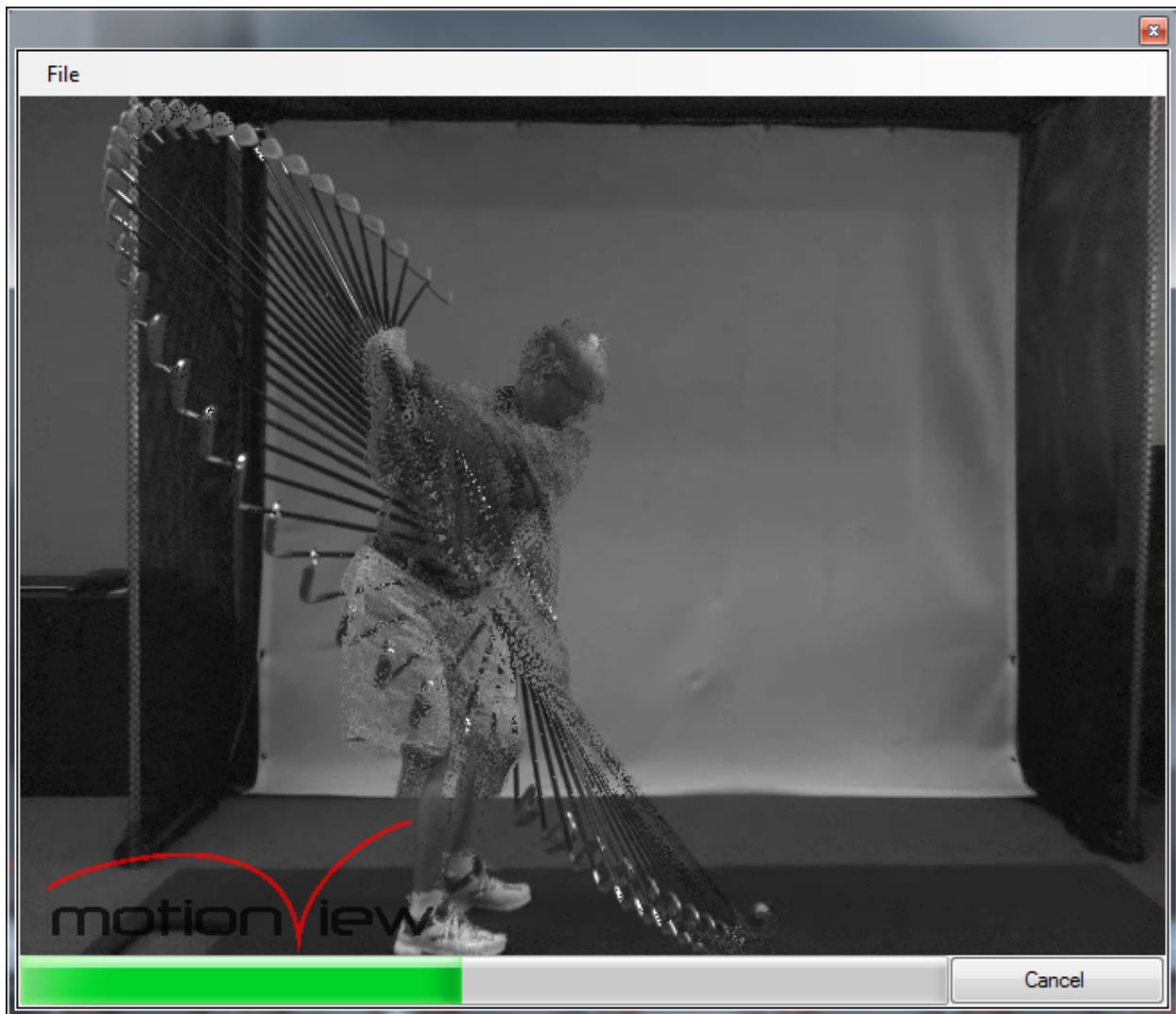
Frame Double Video

Produces a new AVI video file while attempting to [DEINTERLACE](#) the original file. If the original video file is interlaced, such as videos captured from DV Camcorders or USB Video Grabbers, then the end result will be a new video that contains twice as many images (Double the number of Frames) as the original video. This technique works on interlaced videos only. You cannot modify the speed or orientation of the video file when frame doubling, nor can you embed drawings.

Strobed Video

A Strobed video contains an extraction of only the moving elements in each frame of video. The moving elements are superimposed on top of the static elements.

For the best results, use a high speed camera, and make sure that that camera is absolutely stationary [on a tripod].



This strobed video was produced with a 75 FPS camera

Control Panel

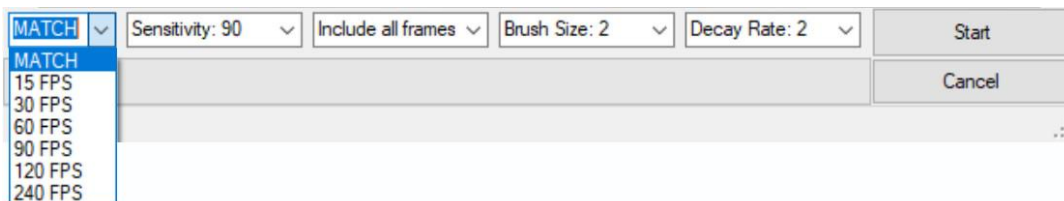
There are a number of settings that can be used to control the results during video strobing. These settings are presented on the Strobe Control Panel, as shown and outlined below.



The Strobe Video Control Panel

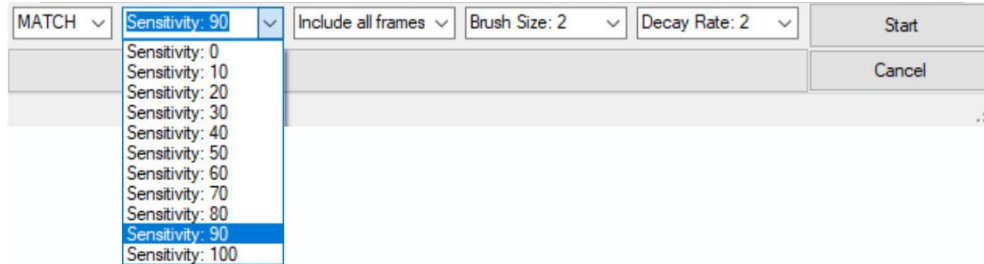
Match

Controls the full speed playback rate of the strobed video file. This allows you to create a strobed video file that will play at a different speed than the original video (when displayed in full speed within the software, or in some other media player).



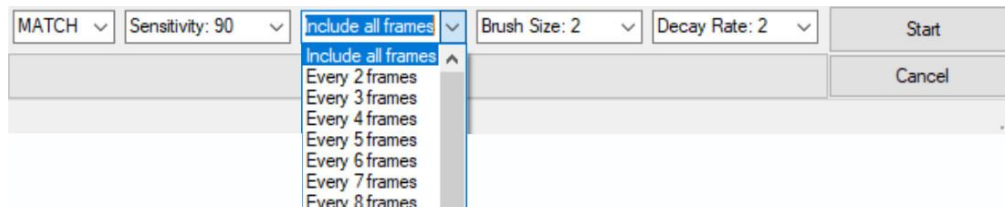
Sensitivity

Determines how sensitive the strobing logic is to variations in the pixels from one frame of video to the next. Setting the sensitivity lower will reduce the amount of movement that is detected in each new frame.



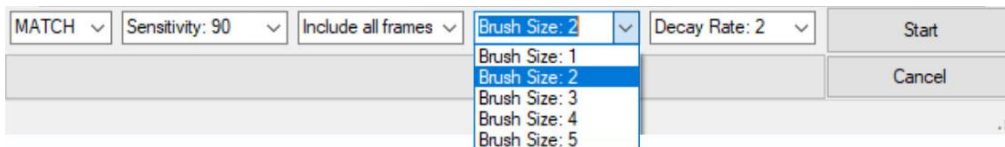
Include All Frames

This drop down list allows you to skip frames during the strobing process.



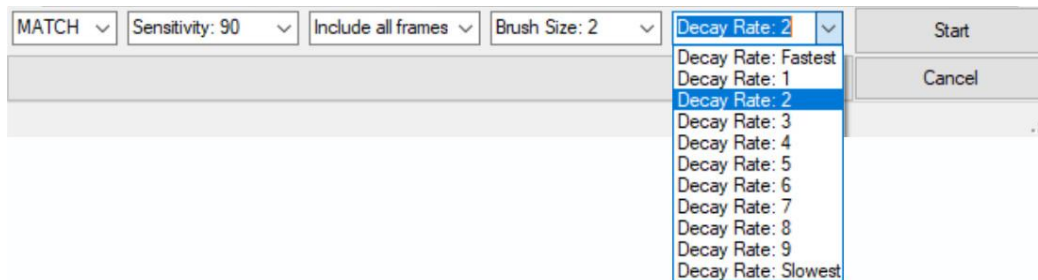
Brush Size

When a change is detected in a pixel, the surrounding pixels are copied into the next frame. Changing the Brush Size will determine how large of an area to copy. The larger you set the size the more “blocky” the output will appear.



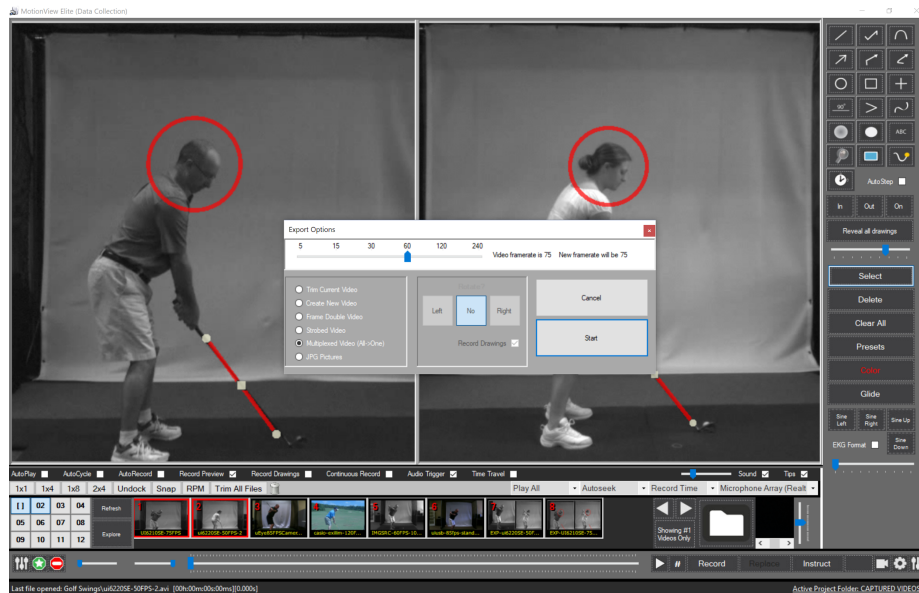
Decay Rate

Sets the speed at which changed pixels may be overwritten by later changes to the same pixel. This feature allows you to create videos in which past movements tend to “fade away”, allowing you to observe new motion in the same physical area of the image. The higher you set the Decay Rate the slower movements will fade away.



Multiplexed Video

Creates a single video file containing the videos currently displayed and loaded in the workspace. Any markups present will also be recorded in the new multiplexed video.



Two videos are loaded in Sots 1 and 2. and Multiplex option selected ready for export



Multiplex Video displayed in Slot 1 after export.

Displayed above is a multiplex video showing side by side swing comparison with markup. This video can now be emailed or shared with student. See also [Instruct Feature \(for creation of instructional videos\)](#).

Exporting JPG Pictures

Creates a series of JPG picture files from each of the video images within the current **Begin/End Range**, as specified by the [Begin/End Moment Buttons](#) on the [Toolbar](#).

You can rotate the images left or right, which is helpful when working with videos from an iPhone or Android device.

You also have the option of embedding the drawings in the new JPG picture files. The JPG pictures will be created in the folder where the original video file is stored.

Additional Features

Setting the Begin and End Moments

Set the begin and end moment sliders (on the [ToolBar](#)) so as to limit playback to a specified range within the video. The range that you identify will be applied to all other video slots.



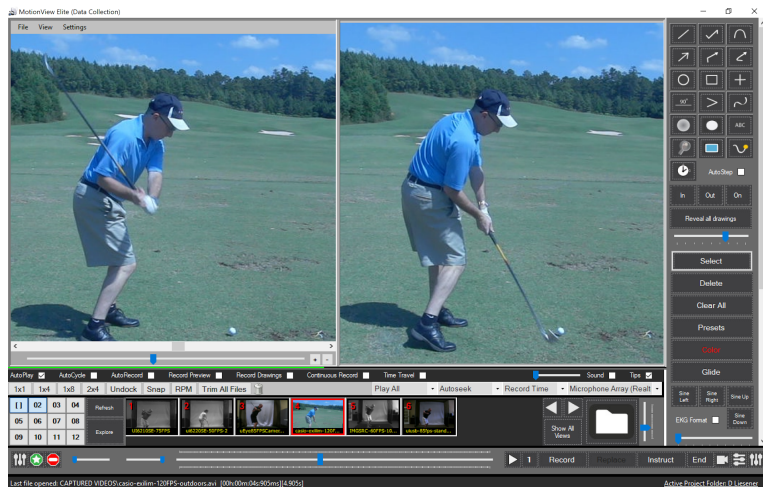
To set the Begin Moment, position the left slider to the beginning of the action you wish to study OR position the video using the large primary slider bar and then press the green octagon (F1) which will automatically sets the Begin Moment slider to the current video position.

To set the End Moment, position the right slider to the ending point of action OR position the video using the large primary slider bar and then press the red octagon (F2), which will automatically set the End Moment slider to the current video position.

The “Moment of Interest”

The “Moment of Interest” represents a common moment that can be found in each video file displayed by a video slot. Examples would be the moment of contact with a ball, or the moment a pitch is released, etc.

Most videos are not the same length of time, nor do most actions occur within the exact same period of time. Use the Beginning Moment, Ending Moment, and Moment of Interest sliders to quickly focus your attention on the action that interests you, and to synchronize dissimilar videos.



To set the moment of interest, use the small slider bars at the bottom of each video slot. These controls are hidden and will automatically be revealed when your mouse hovers near the bottom of the video slot. Use the slide to locate the moment of interest in each video. Once the moment of interest is set for each video slot all videos will arrive at this moment at the same time. Use the main slider bar at the bottom of the screen to control playback of all the videos simultaneously.

To make adjustments to the Moment of Interest using arrow keys on the keyboard, see [Adjust Moment of Interest](#) under [ToolBar](#).

NOTE: The Moment of Interest sliders should not be used for general seeking within video files! They should be used only to set the moment of interest position in each video.

Using Overlay feature

Overlay is a method of semi-transparently superimposing two videos, so that one video is visible “on top” of another. To create an overlay, load a video to video slot #1 and a second video in any of the other slots numbered 02 through 12. Select the overlay option from the [file menu](#) of the video you wish to overlay with the video video slot #1. To remove the overlay select the **Remove overlay** option from the file menu of video slot #1.

In the example below a professional golf swing is loaded in video slot #1 and a student in slot #2. Swings have been synchronize using the [moment of interest](#) feature. Use the file menu from slot #2, to select the “Overlay on Video #1” option. This will place a transparent copy of the student over the professional golfer. On the right edge of video slot #1 there will be 4 vertical sliders which can be used to position the overlay effect. The functions of these sliders are described below:

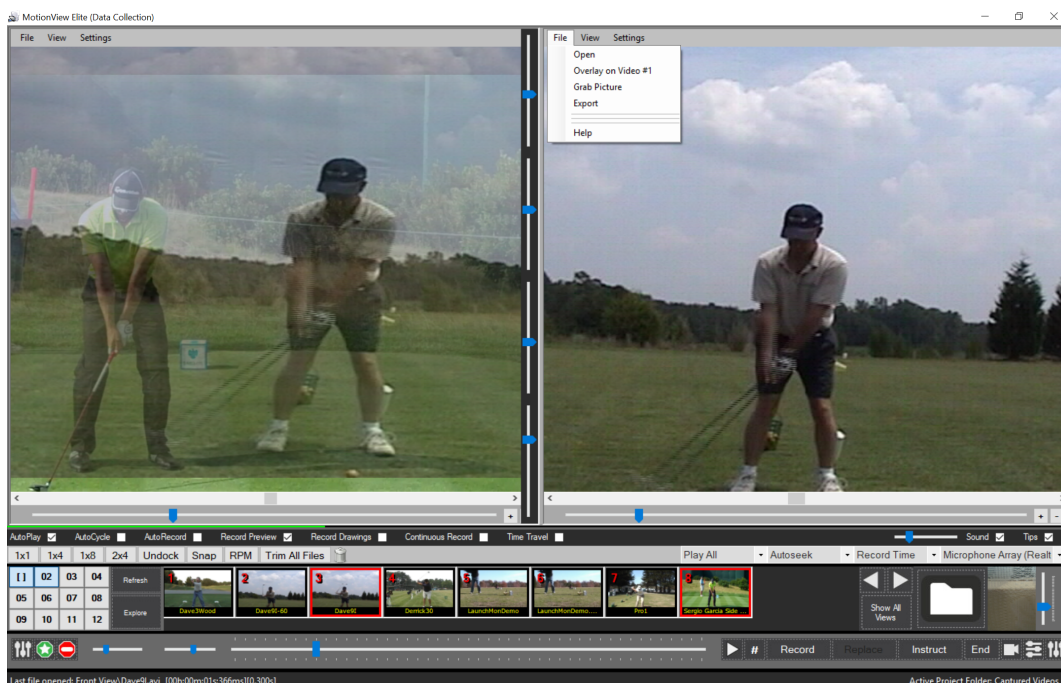
Slider 1 - zoom in/out;

Slider 2 - Vertical alignment;

Slider 3 - Horizontal alignment;

Slider 4 - Transparency

Use the sliders to position the overlay effect. With the video synchronized and the overlay in place, you can play the video and see a side by side comparison of the two swings superimposed in the first video player. Click here to see video guide to this feature.



Hands Free Recording and Playback

When properly configured MotionView™ can record and playback recordings with little or no interaction with the keyboard or mouse. For example, it is possible to configure the software to record a golf swing, or other activity, then automatically stop recording after your swing, playback just your swing, and then start recording again.

To accomplish a hands free configuration for a golf swing, do the following:

- Turn on [AudioTrigger](#) and configure with 2 second delay.
- Turn on [AutoPlay](#)
- Configure [AutoSeek](#) to final 5 seconds
- Turn on [AutoRecord](#)

With the above configuration, [start a recording](#) (tap space bar). Get into position and take your first golf swing.

- The **AudioTrigger** will listen for the ball impact and automatically stop the video after a 2 second delay. The delay allows capture of your follow through.
- The **AutoPlay** feature automatically loads and starts playing the video just recorded.
- The **AutoSeek** feature plays only the last 5 seconds of the video. Thus if it took some time to set the ball, get into position, etc. this part of the video will be skipped and only the swing will be shown.
- The **AutoRecord** feature will automatically start a new recording after playback. You can now take another swing to repeat the cycle. It will continue in this mode until you physically stop the recording with the mouse or keyboard keys. All your swings will be available as separate clips to view again after your practice session.

Of course the above would work equally well with other sports like baseball when the ball makes contact with the bat or you could create a sound yourself with a clap of the hands. The sensitivity of the audio trigger can also be configured. See [The Audio Trigger](#).

All of the above features also have [shortcut](#) keyboard assignments to them and thus can be used with third party foot pedals, or wireless remotes.

MotionView™ Wireless Remote

With the MotionView™ Wireless Remote (purchased separately) you can free yourself from direct interaction with the computer. Buttons are available for each of the following functions:


- Start/Stop Live Video Capture [▶]
- Play/Pause video [⏸]
- Move back 1 sec from current position [◀]



(Your remote and button layout may differ)

Automatic Marker Detection and Tracking

The software is capable of automatically tracking a distinctively colored marker. To use this feature follow these steps:

- Place an easily distinguishable marker on the subject being filmed.
TIP: Use a bright color that is unique within the scene and presents as much contrast as possible.
- Select **Trak** icon  on the [Drawing Tools](#) then click in the center of the marker to begin tracking.
- MotionView™ will automatically attempt to locate the marker in each successive frame of video, and will create a drawing tracking its progress. This will continue until ...
 - (1) the ending moment is reached in the video,
 - (2) the CANCEL button is pressed, or
 - (3) the software loses track of the marker.

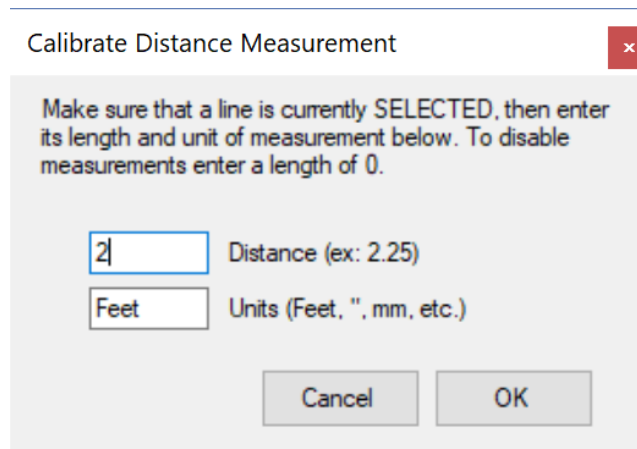


Automatic Marker Detection and Tracking

Measuring Distance

MotionView™ is capable of measuring distance using video captured from any camera. Before measurements may be taken the software must be calibrated. The **Calibrate Distance Measurement** setting is located on the [Settings Menu](#). The steps required to perform a measurement are as follows:

- Draw a line over an object of a known length in the image. For accurate measurements your calibration line must be the same distance away from the camera as other objects you intend to measure.
- Use the menu “Settings/Measure/Calibrate Distance Measurement” to display the following window:



Calibrate Distance Measurement

Make sure that a line is currently SELECTED, then enter its length and unit of measurement below. To disable measurements enter a length of 0.

Distance (ex: 2.25)

Units (Feet, ", mm, ', etc.)

Cancel OK

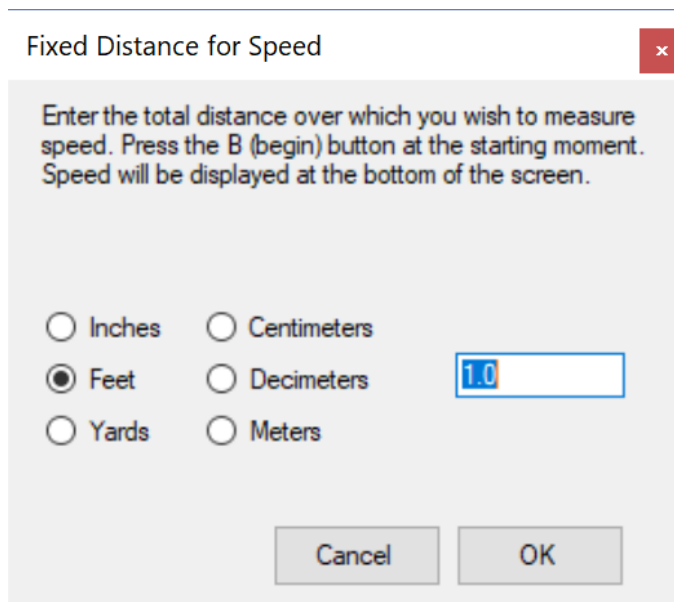
- Enter the distance of the selected calibration line as a number. Do not enter anything other than a number in the top box. Examples of valid numbers are: 1, 1.0, 1.5, 200, etc.
- Enter the units of measurement being used. This box can contain any text or symbols that you like, such as: inches, feet, “, mm, ', etc.

Once the calibration line has been identified the software will automatically display the distance of all other lines on the workspace. For best results measure objects that are perpendicular to the camera and the same distance away from the camera as the calibration line.

To turn distance measuring off enter a distance of 0.

Measuring Speed Over a Fixed Distance

The software can measure speed when you specify a “known distance” over which the action occurs (such as a 50 meter dash, the distance from the pitcher's mound to home plate, etc). Using the menu “Settings/Advanced/Enter Fixed Distance for Speed Measurements”, you can provide the total distance as shown:



Fixed Distance for Speed

Enter the total distance over which you wish to measure speed. Press the B (begin) button at the starting moment. Speed will be displayed at the bottom of the screen.

Inches Centimeters
 Feet Decimeters
 Yards Meters

1.0

Cancel OK

To perform a Speed measurement:

- Position the video to the moment where the motion begins (see [Main Slider](#))
- Press the [Begin Moment](#) button on the [Toolbar](#).
- Advance the video forward until the full distance has been covered by the object or person in motion.
- The speed will be continuously calculated and displayed at the bottom of the screen as you slide the video forward. The measurement will only be accurate once the video reaches the full distance that you specified.
- Speed will be displayed in both MPH and KPH.

Instruct Feature (for creation of instructional videos)

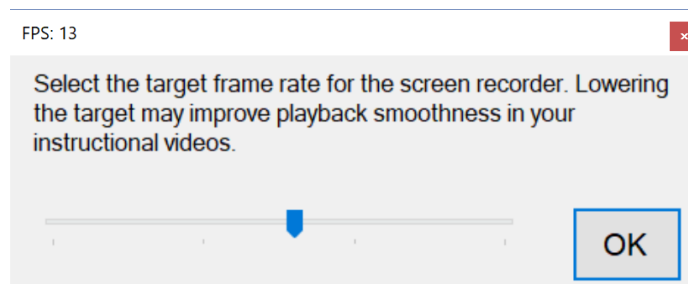
MotionView™ is capable of creating high definition training videos capturing everything done on the Workspace along with audio commentary captured from a computer microphone.

To create an Instructional Video, from the [Toolbar](#) press the [Instruct](#) button.



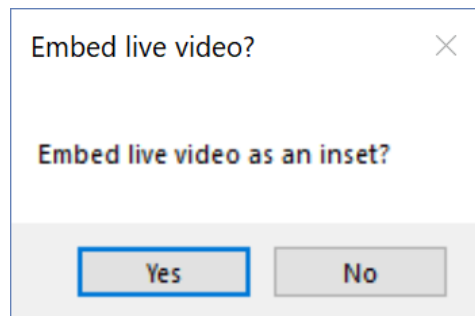
Select target frame rate

At the start of each Instructional Video a prompt will be given to select the frame rate for the screen recorder. If you notice that the audio and screen action are out of sync try lowering the frame rate. Select Ok to proceed.



Embedding Live Images During Recording

If you have a live video feed connected, such as a webcam, MotionView™ will prompt to include the live video feed as a inset (picture-in-picture). This feature allows you to embed live images, such as your face, into the Instructional Video file in real time.



Pausing, Resuming, Ending Instruct

When creation of an Instructional Video is active, All activities on the screen, as well as your voice via the computer microphone will be captured and the **Instruct** button changes to a timer showing the current length of the recording.



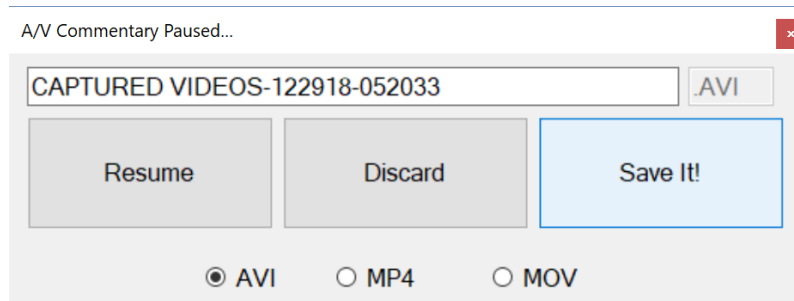
Clicking on the timer will pause the recording, changing the button to **Resume**.



Press the **Resume** button to start recording again.

Press **End** to stop recording and save.

MoitonView™ now prompts for the filename. Select **Save It!** to save the video. **Resume** will allow you to return and continue with your Instruction. **Discard** cancels the save and the entire Instruction will be lost.



By default, video Instructions are saved under the Active Project in a subfolder named "Video Commentaries", in a standard Windows Media format. No special software is need to view the video. Video files will be created in a compressed .AVI format by default. Other options include .MP4 and .MOV.

Data Collector (add on)

Game Film Analysis for All Sports

Introduction

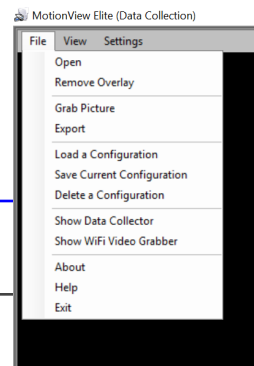
About

Data Collector is a powerful solution for game film review and analysis. If you coach or play a team sport such as football, hockey, soccer, baseball, basketball, or any other, then MotionView™ with Data Collector will prove to be a valuable asset as you coach your team.

When using MotionView™ with Data Collector, you can easily capture and speed through your game films, identifying each play with a simple click of the mouse or keyboard. MotionView™ with Data Collector also makes it easy to organize plays by teams or players, by the types of plays executed, the results of the plays, or even by your own commentary.

Once you've identified the plays (referred to as "scenarios") you can review video clips containing only similar or related plays (all the offensive plays for instance). This will allow you to focus your attention on any aspect of the action.

Data Collector's design is simple and easy to use by anyone who wants to break down film. It is available as an add-on to our Basic or Elite version of MotionView:



MotionView™ Data Collector

- 2 Camera Video Capture
- 2 Video Playback Slot
- Variable Rate Slow Motion Playback and Frame Stepping
- Easy Video Tagging
- Easy Scenario Sorting
- Static Telestrator Drawing Tools
- Up to 10 categories for Scenario Descriptors

MotionView™ Data Collector Elite

- 2 Camera Video Capture, expandable up to 8 Cameras!
- 12 Synchronized Video Playback Slots
- Variable Rate Slow Motion Playback and Frame Stepping
- Easy Video Tagging
- Easy Scenario Sorting
- Animated Telestrator Drawing Tools
- Unlimited categories for Scenario Descriptors
- Easy Scenario Filtering
- Highlight Film Creator
- Data Export to Excel
- Free online file sharing via Dropbox™, Google Drive™, or Microsoft Skydrive™

Hi Definition Wide Screen Video Commentaries including your face captured via webcam as a picture-in-picture!

Deliver your HD Video Commentaries on CDROM, USB Memory Stick, or Online via File Sharing

Terminology

Auto Advance – Plays all scenarios in the current table starting with the currently selected row and continuing until the end of the table.

Begin - the beginning moment set within a video file.

Cumulative – the total time of each scenario up to and including the current scenario.

Data Collector – a file storing all data associated with the scenario table, it includes all the necessary information describing the textual term and numeric ranges that can be used to identify scenarios or events in a video recording.

Elapsed – the length of time represented in the current scenario.

End – is the ending moment set within a video file.

Filtering – enables you to specify the criteria that is displayed in the currently viewed data Collector.

Preset – a user defined shortcut that automatically identifies new scenarios with predetermined descriptors and timing moments.

Scenario Descriptor – an individual field in a Scenario that uniquely identifies a characteristic of an event. The user can assign either textual or numeric values to choose from within each Scenario Descriptor.

The Scenario Table - presents your data in a format similar to an Excel spreadsheet. You can click on any row in the Scenario Table to view the video segment associated with that scenario.

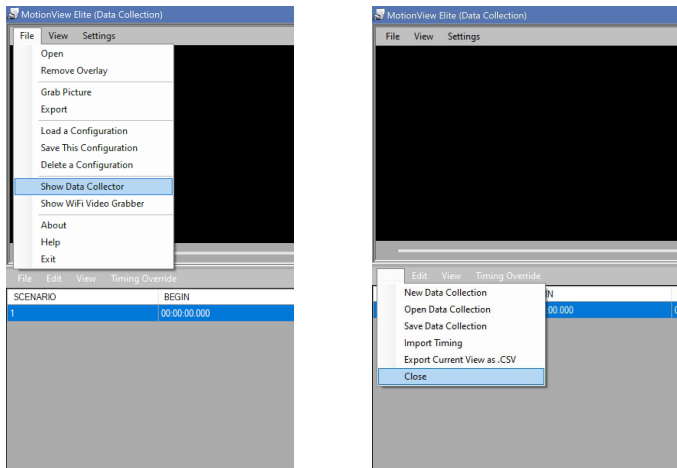
Useful Shortcut Keys

Keyboard Shortcut	Resulting Operation
F1	Set Begin Moment
F2	Set End Moment
F3	Show the Data Collector Scenario Description Form
F4	Add a new row to the Data Collector Scenario Table

For a complete list, see [Shortcuts](#).

Getting started

To open the Data Collector, from the file menu select “Show Data Collector”. Data Collector is an add on that can be purchased separately as an upgrade if your current licence does not have this feature activated. To close the Data Collector select ‘Close’ from the Data Collector file menu.



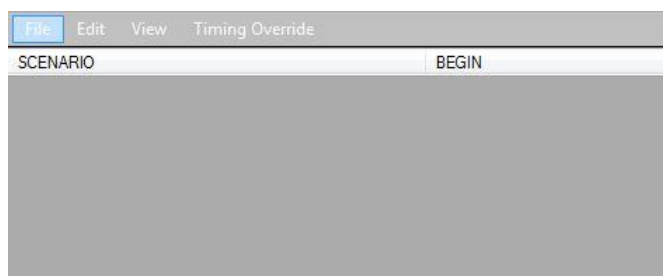
To open Data Collector **To close Data Collector**

Loading Clips

To begin double click on the first video clip you wish to breakdown. This will add a new numbered row to the data collector.

Menu Items

The Data Collector Menus provides additional commands and settings.



File Menu

- “New Data Collection” - creates a fresh Data collection. The user can choose to clear the current scenario descriptors.
- “Open Data Collection” - opens a saved project including the video and scenario descriptors.
- “Save Data Collection” - saves the current project including the video and scenario descriptors as a .xml file.
- “Export current view a .CSV” -

- “Close” - closes Data Collector.

Edit Menu

- “Edit Scenario Descriptors” - edit the Scenario Descriptor Columns using Textual Values or a range of Numeric Values. You can work with an unlimited number of scenario descriptors.
- “Edit Preset” - edit a shortcut that automatically identifies new scenarios with predetermined descriptors and timing moments.
- “Load Descriptors From an Existing Collection” - load descriptors that have been saved from previous projects and that have been saved as .xml files.

View Menu

- “View Presets” - view all of the shortcuts he has set to automatically identify new scenarios with predetermined descriptors and timing moments.
- “View Internal Columns” - is only used by the software and has no value to the user. This is used for troubleshooting issues.
- “My Columns” - allows the user to select a range of columns he wants to be shown in the software. The user can also hide columns using the _ key before the name of the column. View the hidden columns here.

Timing Override

This operation overrides the time shown in the elapsed and cumulative area of the data collector. When shooting video with a still shot or GoPro® camera, the camera tells the software it's only shot the video in 30 FPS when the video could have actually been shot at a higher frame rate. This is to provide better video feedback. This is not a problem until you want an accurate time for the video. The Time Override feature tell the software the actual FPS the video was shot in to provide accurate video time. ***NOTE** This is not problem when recording video inside of MotionView™.

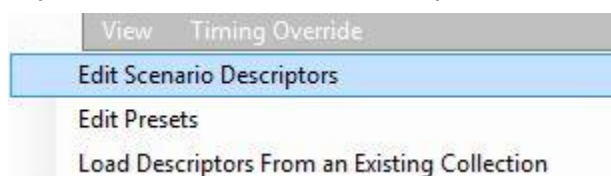
Customizing Scenario Descriptors

MotionView™ with Data Collection allows you to edit the Scenario Descriptors using the screen shown below. You can assign either Textual Values or a range of Numeric Values to any column. You can work with an unlimited number of scenario descriptors (only with an Elite licensed version). You can also save Scenario Descriptor files for various sports, and load those descriptors into future projects. This incredible flexibility allows MotionView™ with Data Collection to work with any sport!

To create or edit your scenario descriptors, follow these steps:

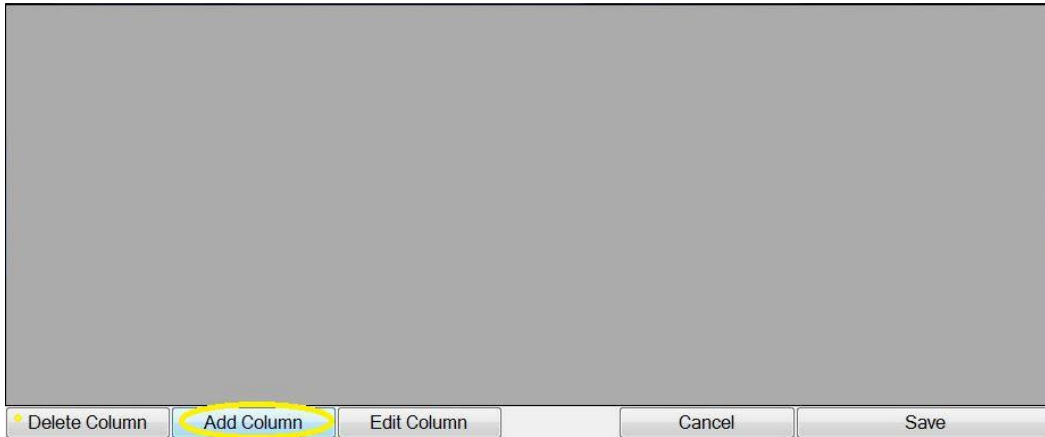
Edit Scenario Descriptors

- Select “Edit Scenario Descriptors” from the “Edit” menu located on the Data Collector menu bar at midway of the screen. This will display a screen similar to the following:



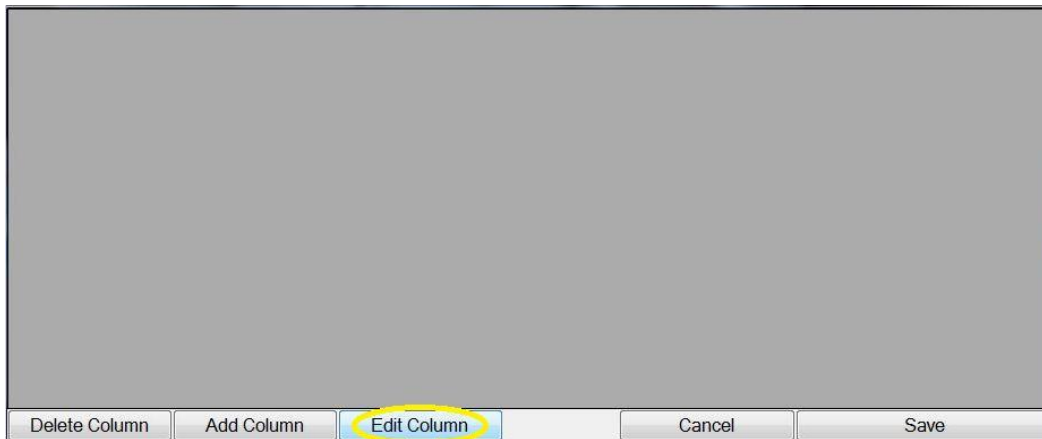
Add Column

- To create a new column, click “Add Column”.

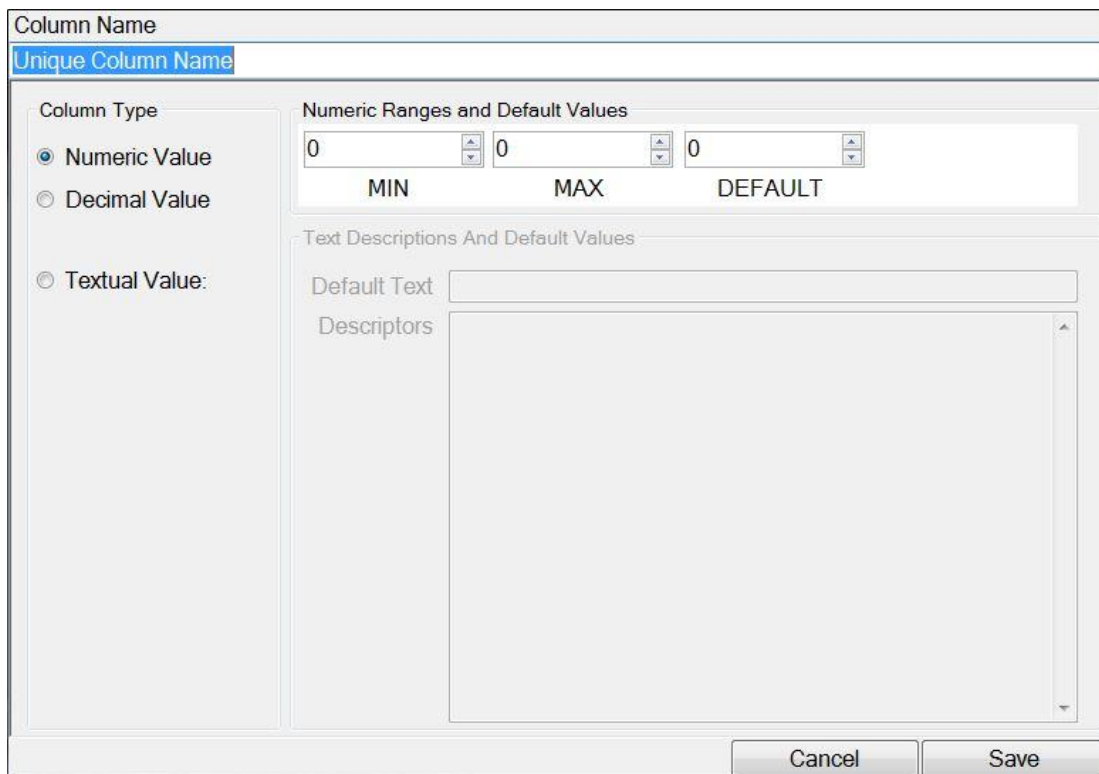


Edit Column

- To edit an existing column, first click anywhere on it and then press “Edit Column”.



Column Editor

A screenshot of the "Column Editor" dialog box. The dialog has a title bar "Column Editor" and a text input field for "Column Name" containing "Unique Column Name". Below this, there are three radio buttons for "Column Type": "Numeric Value" (selected), "Decimal Value", and "Textual Value:". To the right of the "Numeric Value" option, there are three spinners labeled "MIN", "MAX", and "DEFAULT", each with the value "0". Below these, there is a section for "Text Descriptions And Default Values" with a "Default Text" input field and a "Descriptors" text area. At the bottom right, there are "Cancel" and "Save" buttons.

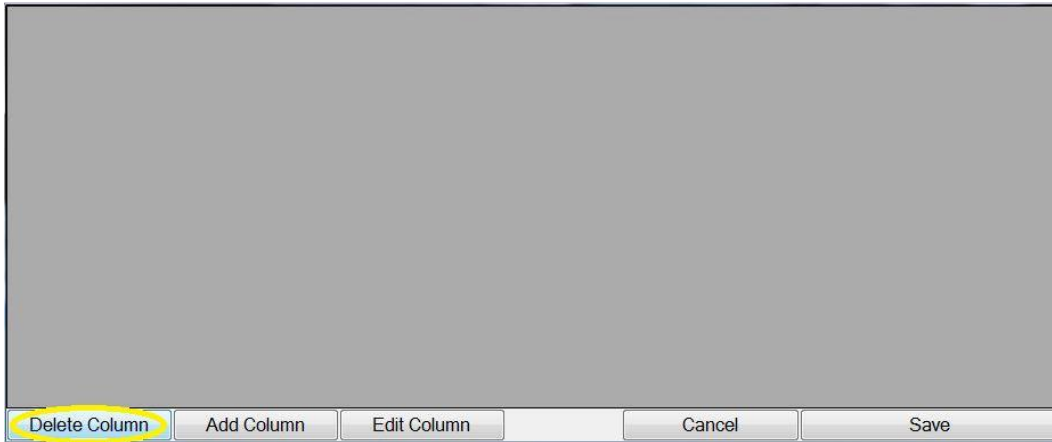
The Name of the column is entered at the very top. If you want to select from textual descriptors check the Textual Value field and type those into the text window, one per line. For numeric descriptors you can provide a minimum, maximum, and default value to be entered into each new Scenario.

- You cannot change the type of data stored in a column once it has been created. (A Textual column cannot be converted into a Numeric column).
- You can change the Name of a column at any time.
- You can add or remove textual values at any time. However, if the Data Table contains textual values that you remove from the descriptor list, you will no longer be able to choose from those particular values when filtering.

- For Numeric Values, the Minimum and Maximum values that you provide will be enforced when you are making selections for the descriptor.

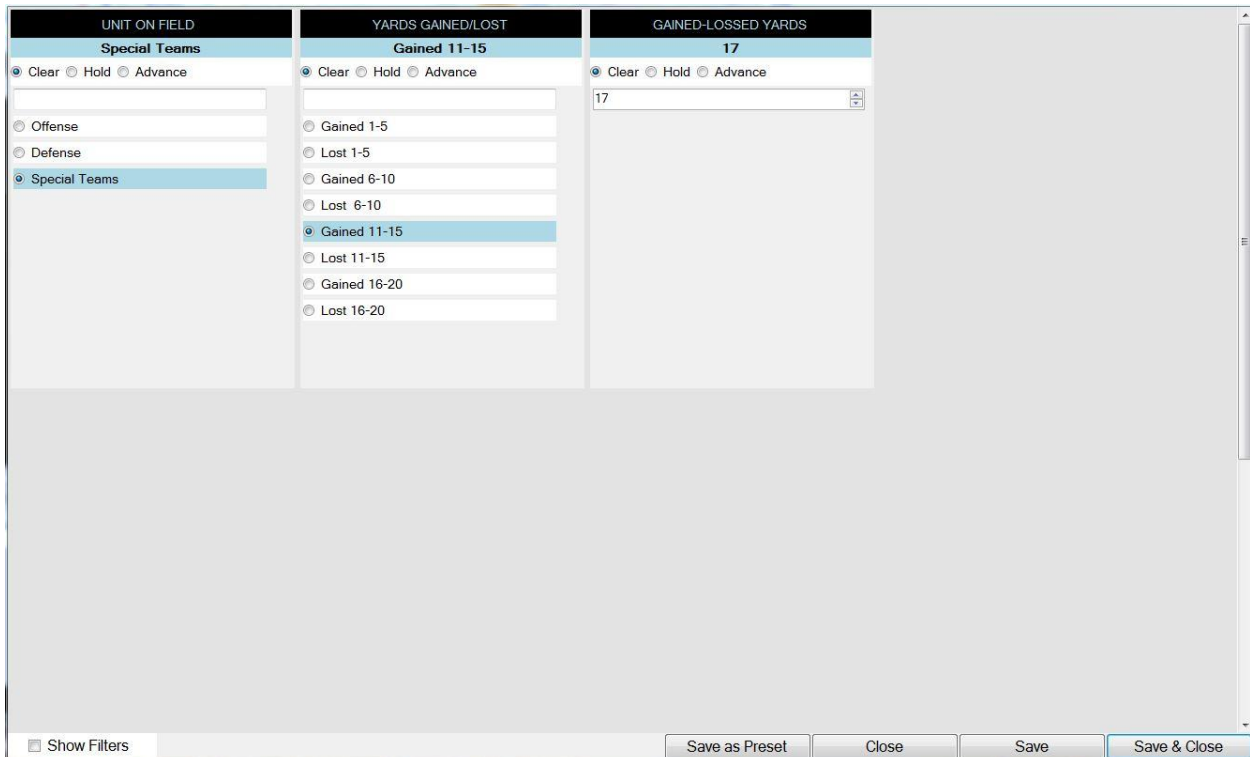
Delete Column

- To remove a column, first click anywhere on it and then press “Delete Column”.



Describe/Filter

Describe/Filter allows the user to “Tag” a play using the scenario descriptors he has set.



Tag Key Events using Stop!Watch Videoanalyse App

All Sport Systems, Inc. has partnered with Scenator Entertainment to integrate **Stop!Watch Videoanalyse™** with MotionView™.

Stop!Watch Videoanalyse App

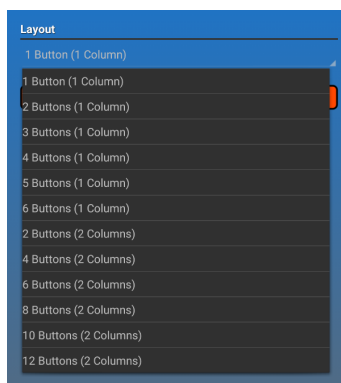
Stop!Watch Videoanalyse™ is a Android app that allows you to mark key events during a game and easily import these into Data Collector allowing you to find these key events immediately after the game. The App can be downloaded from the Google Play store.



[Download Stop!Watch Videoanalyse from Google Play Store here](#)

Stop!Watch Videoanalyse has layouts from 1 button to 12 buttons and allows customizing each button with Key Text appropriate to your sport.

In the example shown American Football is shown. The timer should be started at the same moment as the video recording is started so that all timings will be synced with the video. However, this can also be achieved by, before importing the timings to the data collector, queuing the video to the point where the timer was started.



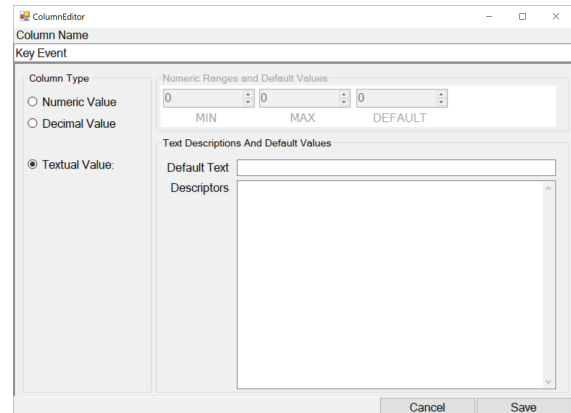
Whenever a key event occurs press the appropriate button to mark this point in the video. An event can be marked in one of two ways. (1) At the start of the event or (2) at the end of the event. In the example of American Football, most of the KEY EVENT tags would only be known after the event/play occurs. Thus we will mark all events once they have been completed. If you are marking events such as downs, field positions, end of a quarter, half time, time outs, etc. then of course you would simply mark the video at that exact moment.

TIP: You can import multiple timings. Therefore, if you wish to create more than 12 event tags you could employ an additional phone or tablet, with a separate data set to tag. Of course it would be important to synchronize the start of the timers.

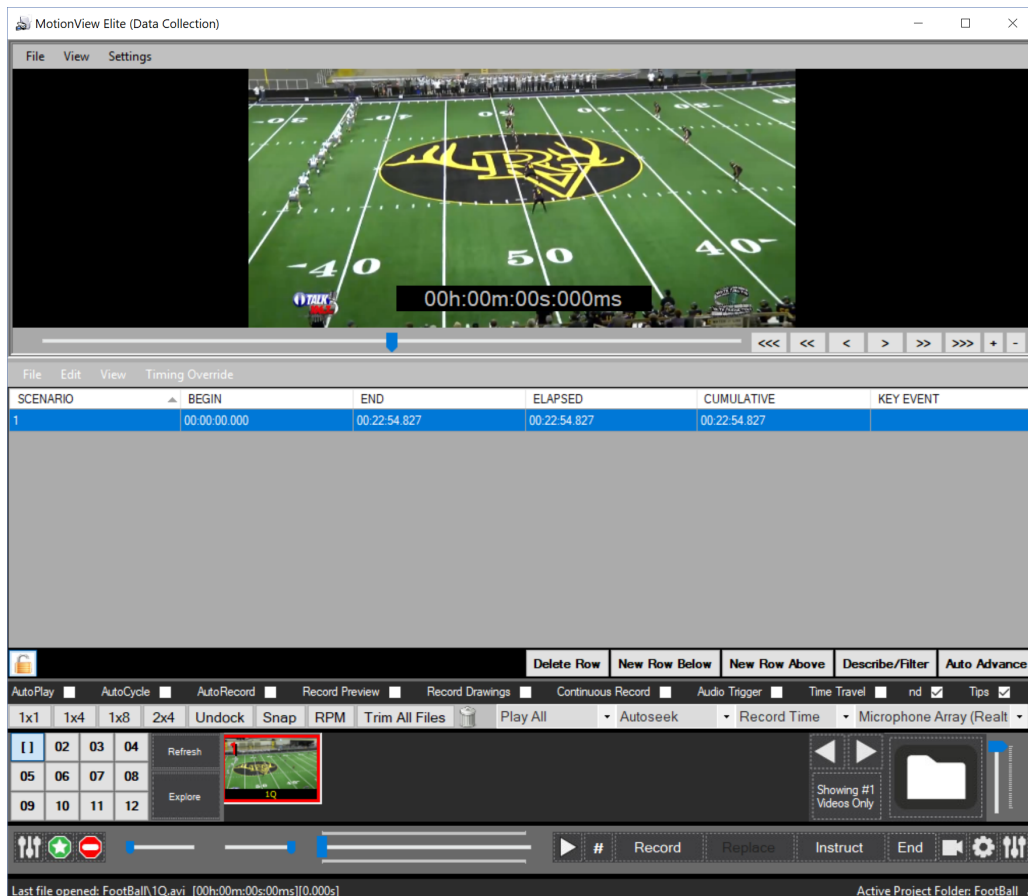
Import Timings

To import timings from **Stop!Watch Videoanalyse** open MotionView™ data collector, load the video associated with the timings you will be importing and insert at least one row. If the recording was started before you started the timer in the app, advance the video to the point where the timer was started. Set this as the begin moment.

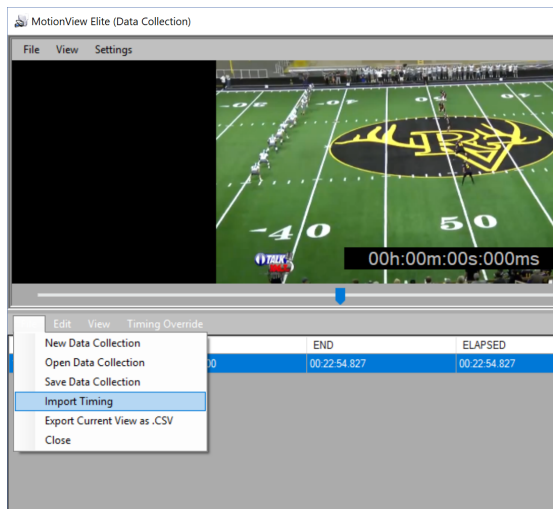
The Key Event text associated with each button (timing) will be imported to the first textual value column in your Scenario Descriptors panel. We recommend creating a “Key Event” column as your first textual value column in your Scenario Descriptors page.



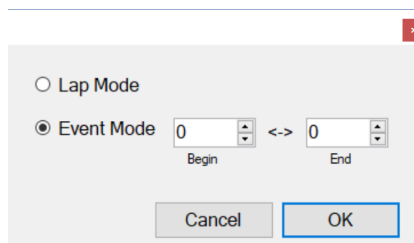
Below is the data collector open, video loaded, with Key Event Column (Textual Value) added to the Scenario Descriptors. We are now ready to import the timings.



From the Data Collector file menu select **Import Timings**.



After selecting the import file you will receive the following prompt:



Lap Mode

Will insert timings as follows:

Begin Moment = End point of previous tagged event (or in the case of the first tag the start of the video).

End Moment = When you pressed the button to tag the event.

Event Mode

Will insert timings adjusted by the **Begin** and **End** timing boxes.

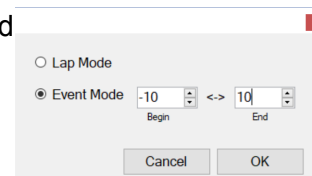
Enter in each box the number of seconds (from the point you pressed the button) that you want the tagged event to start/end.

In this example, where Begin = -10 and End = 10 each event will be inserted as follows:

Begin Moment = Button Press (-) minus 10 Seconds

End Moment = Button Press (+) plus 10 Seconds

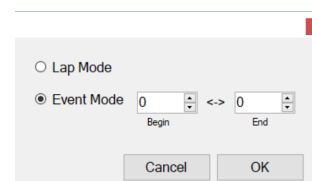
Each event will be a 20 second segment.



Where Begin and End are each set to zero:

Begin Moment / End Moment = Button Press

Each tagged event will advance the video to the exact moment the button was pressed and video will begin playback from that point.



Data Collector shown below with timings imported. Notice that Key Event column contains the corresponding button text from the app.

The screenshot displays the MotionView Elite (Data Collection) software interface. At the top, there is a video player showing a football game in progress. A timestamp overlay on the video reads "00h:01m:45s:897ms". Below the video is a data table with the following columns: SCENARIO, BEGIN, END, ELAPSED, CUMULATIVE, and KEY EVENT. The table contains 11 rows of data, with the third row highlighted in blue. Below the table is a control panel with various buttons and checkboxes, including "Delete Row", "New Row Below", "New Row Above", "Describe/Filter", and "Auto Advance". At the bottom, there is a status bar showing "Last file opened: FootBall\1Q.avi [00h:01m:45s:897ms][0.000s]" and "Active Project Folder: FootBall".

SCENARIO	BEGIN	END	ELAPSED	CUMULATIVE	KEY EVENT
1	00:00:48.931	00:01:25.345	00:00:36.414	00:00:36.414	KICK OFF / PUNT
2	00:01:25.335	00:01:45.896	00:00:20.561	00:00:56.975	RUN LOSS
3	00:01:45.897	00:02:17.310	00:00:31.413	00:01:28.388	FUMBLE
4	00:02:17.324	00:02:17.359	00:00:00.035	00:01:28.423	KICK OFF / PUNT
5	00:02:17.359	00:02:41.859	00:00:24.500	00:01:52.923	FLAG / TIME OUT
6	00:02:41.859	00:03:19.875	00:00:38.016	00:02:30.939	RUN GAIN
7	00:03:19.875	00:03:51.257	00:00:31.382	00:03:02.321	RUN GAIN
8	00:03:51.257	00:04:34.758	00:00:43.501	00:03:45.822	RUN GAIN
9	00:04:34.758	00:05:16.557	00:00:41.799	00:04:27.621	FLAG / TIME OUT
10	00:05:16.557	00:05:45.161	00:00:28.604	00:04:56.225	FLAG / TIME OUT
11	00:05:45.161	00:06:27.941	00:00:42.780	00:05:39.005	FLAG / TIME OUT

Troubleshooting Tips

How to install or reinstall MotionView

You can download the latest copy of MotionView from our website from the following link:

<http://allsportssystem.com/download-video-analysis-software.php>

NOTE: If you have a licence from an earlier version of MotionView scroll to the bottom of the page to find links for earlier versions.

The first time you open MotionView after installing you will be prompted to activate the software using your licence key which you received when you purchased MotionView. You can also activate MotionView, using the activation program installed under Start->All Programs->MOTIONVIEW->Activate MOTIONVIEW.

If you purchased the Perpetual USB Key, simply plug your USB key into the USB port prior to opening MotionView. The USB Key, allows you to run the software on any computer as long as you have the USB Key inserted while using the software.

How to restart MotionView using Default Settings...

To open MotionView with default settings ...

- navigate to the MotionView program directory on your start menu, and select MotionView [default settings] link.
- Alternatively search for "MotionView" while in the start menu and the search results will present "Motion View [default settings]" click on the link to open MotionView.
- During startup of MotionView it will request which language to use
- Restarting MotionView using default settings will not cause any loss of videos

Working with .mts files

To work with .mts files in MotionView you need to install the Haali (also called Matroska) Media Splitter. This is a free download available at <http://haali.su/mkv/>.

Can my MotionView™ license be transferred?

USB Key: If you purchased the Perpetual USB Key, then yes you only need to download MotionView to the computer and insert your USB key into the USB port. The USB Key allows the software to work on any computer as long as you have the USB Key inserted while using the software. You must also be running the correct version of the software.

USB keys will work with the version of the software at the time of purchase as well as new releases for one year. **Important note:** When installing MotionView for the first time on a

computer, always install the original version purchased. After installing the original version and activating it with your USB Key, you can download and install new releases (be sure to only download releases you qualify for). See also [New releases](#), [Upgrades and Refresh](#).

MotionView™ by Download (1 Instant Activation): This license is a **one-time activation** on **one computer**. It is **not transferable**. Note that swapping or reformatting the hard drive or reinstalling Windows will clear the activation from your computer. In this case, a new license will be required to reactivate the software. If you wish to reactive your license a software refresh is required allowed ([see here for pricing](#)). If you plan to regularly upgrade or change computer often then you will need to purchase the USB Key to avoid

See also [New releases](#), [Upgrades and Refresh](#).

Customers who do not wish to pay these refresh charges to transfer a license or reactive a license when there are hard drive problems should consider purchasing the Perpetual USB Key.

[How can I receive technical support for MotionView software?](#)

First check our online Help Desk at: <http://www.allsportssystem.com/helpdesk/> here you will find articles about troubleshooting common problems or known issues on how to address them.

See also the [MotionView Support Guide](#) available online. To download or view the latest edition of this user guide see www.allsportssystem.net.

Telephone and remote desktop support is also available for a nominal fee.

See <http://allsportssystem.com/support.php>

Email support is free at support@allsportssystem.com.

Glossary

Audio Trigger - Automatic detection of a loud noise (such as a golf club hitting a golf ball, or a bowling ball striking the lane) which can be used to trigger some action in the software, such as automatically terminating video recording and beginning slow motion video playback. A microphone is required for Audio Triggering to function. See [Hands Free Recording and Playback](#) and [The Audio Trigger](#).

AutoCycle - Automatically reverses the direction during playback between forward and reverse upon reaching the end or beginning. See [AutoCycle](#).

AutoPlay – Automatically begin playback each time a new video file is opened. See [AutoPlay](#)

AutoRecord – Automatically begin a new recording from the live video feed after playback has finished one time. Used in concert with AutoPlay for hands-free operation of the software (capture video, play video, repeat). See [Hands Free Recording and Playback](#) and [AutoRecord](#)

AutoSeek – Instructs the software to automatically advance each newly opened video file to the specified position, in seconds, from the end of the file. This is useful when you know that your recordings contain a period of “dead time” at the beginning, such as when using Audio Triggering [might be nice to add “Audio Triggering” to this list of terms]. See [Hands Free Recording and Playback](#) and [AutoSeek](#).

AutoStep – Instructs the software to automatically advance the video one frame each time the mouse is clicked on a video image. This can be useful for tracing the path of a moving object while using the Curve tool. See [AutoStep](#).

Begin and End Moments – Identifies the begin and end of relevant content within a video. Once identified, the video slot will present only the video content found between these two moments. See [Set Begin/End Moment](#).

Deinterlace – Interlaced video, such as that created by video camcorders, consists of video half-frames containing only 50% of the horizontal lines required to produce a complete image (each frame contains the opposite 50% of the lines). Such video appears blurry, jagged, or shadowed when viewed on a computer screen. Deinterlacing combines the half-frames so that a complete image is presented to the computer screen without the artifacts. See [Frame Double Video](#)

NOTE: If you Deinterlace a digital video, the digital video may look worse. Make sure this option is Unchecked when working with digital video files.

Dock/Undock – “Undocking” separates all video slots from the confines of the workspace and allows them to be individually positioned and sized anywhere on your screen. See [Function Bar](#).

Explore – Opens the currently active folder in Windows explorer. See [Explore](#).

H/W Acceleration – Video graphics adapter feature that can sometimes make video playback smoother and clearer. See [Camera Configurations](#) and [Settings Menu](#).

Instruct – Creates instructional videos by capturing activities performed on the workspace along with audio commentary. Instructional videos are dynamically created in real time as you use the software. Picture-in-picture video showing the instructors face can be embedded into the A/V Commentary when a live video feed is available during the recording session. See [Instruct Feature \(for creation of instructional videos\)](#).

Moment of Interest - The moment of interest refers to a moment in the video such as a golf club making contact with the ball, or a pitcher releasing a ball. Identifying the Moment of Interest in multiple video clips enables videos of dissimilar speed or duration to be synchronized, so that all videos arrive at their Moment of Interest at the same time. See [Adjust Moment of Interest](#) and [The “Moment of Interest”](#).

Multiplex – Creates a single video file containing the videos of all open video slot players in the workspace. See [Multiplexed Video](#).

Overlay – A method of semi-transparently superimposing two videos, so that one video is visible “on top” of another. To learn more about this feature see [Using Overlay feature](#).

Record Preview – When recording, the live video feed is displayed as full size video on the workspace. When this option is off the live video feed preview will be shown on the [Thumbnail Panel](#) allowing the user to work with other video files while new videos are being recorded. See [Camera Preview](#).

Strobe – An automated analysis of a video. A Strobed video contains an extraction of only the moving elements in each frame of video. The moving elements are superimposed on top of the static elements. See [Creating Strobed Videos](#).

Thumbnail Panel – Each time a video is imported or created by MotionView™ small pictures called thumbnails are automatically created. The Thumbnail Panel, located under the video slots, is used to display available videos or pictures in the currently selected folder or project. The thumbnails can be dragged and dropped directly into video slots for viewing. See [Thumbnail Panel](#).

Trim – Permanently reduces the length of a video. Trimming is based on the currently configured Begin and End Point. See [Trim All Files](#) and [Trim Current Video](#).

Video Slot - An individual video player that can be synchronized with other video slots. MotionView™ provides up to 12 video slots, depending on your edition. Each video slot has its own menu of commands at the top and [Moment of Interest](#) slider at the bottom. The menu and slider can be revealed by placing your mouse pointer near the top of the video slot to reveal the menu or the bottom of the video slot to reveal the moment of interest slider. See [Video Slots and menus](#).

Workspace - This is the top area of the MotionView™ window where videos are displayed. The workspace can display up to 8 resizable video slots. The number of video slots will vary based on your edition of MotionView™. See [Getting Started: Overview of Work Space](#)