

Quintic Software

Tutorial 4

Synchronisation

V31

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1. Viewing Modes

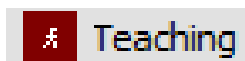
Quintic software will allow the user to open more than one video (up to six) at a time for synchronisation and analysis. The level of Quintic software you are using (Sports, Coaching or Biomechanics) will control how many videos you are able to open at one time.

Quintic Sports v31 – Up to 2 Viewing Windows at one time.

Quintic Coaching v31 – Up to 4 Viewing Windows at one time.

Quintic Biomechanics v31 – Up to 6 Viewing Windows at one time.

Click on the '**System**' tab within Quintic software. These buttons change the shape and size of the windows in which the video clips are displayed.



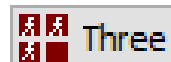
- Sets the screen in the Teaching mode which fills the computer screen so you can see the whole image.



- Sets the screen in the Vertical mode which suits images that are longer than they are wide.



- Sets the screen in the Horizontal mode which suits images that are wider than they are long.



- Opens a total of 3 windows (Coaching & Biomechanics).



- Opens a total of 4 windows (Coaching & Biomechanics).



- Opens a total of 5 windows (Biomechanics Only).



- Opens a total of 6 windows (Biomechanics Only).

It is, of course, always possible to resize the windows to suit your needs by dragging them from the corners but these buttons automatically set the window at the correct size for a number of functions in the Quintic software.

N.B. The second, third, fourth, fifth and sixth windows have most of the same functions as the main window.

N.B. You cannot open the same video file in more than one window. If you need to, create a duplicate copy of the video to open in another window.

GO TO QUESTIONS 1, 2, 3, 4 AND 5 ON THE QUESTION SHEET (PAGE 11 - 13)

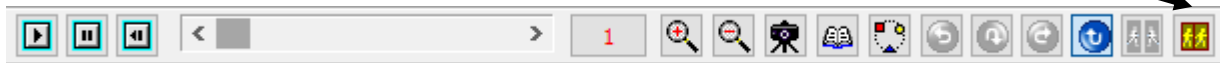
2. Video Synchronisation

a. Manual Synchronisation

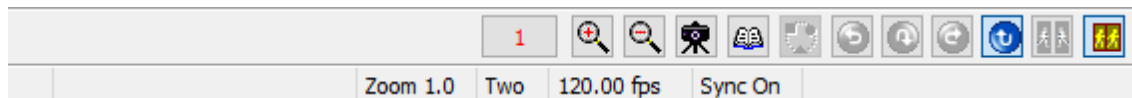
Open the video 'CMJ-AS1' from the '6 Jumps' folder in the main window.


Open the video 'CMJ-AS2' from the '6 Jumps' folder in the second window.

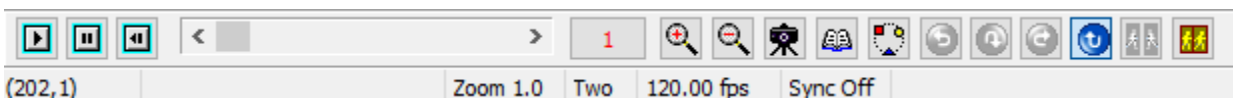
Use the play and pause buttons along with the video scroll bar to advance both clips to the point where the athlete first moves his arms upwards. (A synchronisation point can be any common time point occurring in both videos e.g. foot contact, ball strike, top of the backswing.) When both clips are at this position, press the '**Synchronisation**' button on the second window.



The two clips are now synchronised and can be played at any speed using the controls in the main window. Once the videos are synchronised the scroll bar in the second window will disappear, and 'Sync On' will be displayed in the status bar.



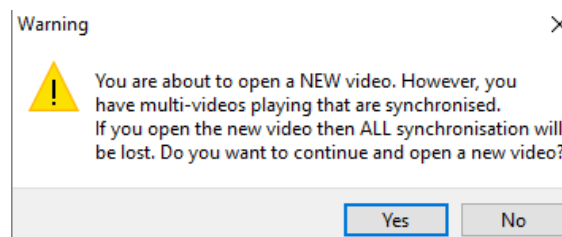
To cancel the video synchronisation, press the  button again. The scroll bar in the best window will reappear and 'Sync off' will be displayed underneath the '**Synchronisation**' button.



Now open the video 'CMJ-AS3' from the '6 Jumps' folder in the third window and 'CMJ-AS4' from the '6 Jumps' folder in the fourth window.

The third and fourth windows can be synchronised to the main window using the same process as outlined above. This process can also be completed in the fifth and sixth windows if required.

N.B. Synchronisation must be turned off before a new video can be opened.



GO TO QUESTIONS 6 AND 7 ON THE QUESTION SHEET (PAGE 14-15)

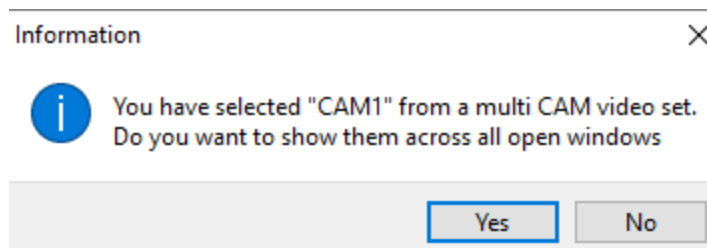
b. Automatic Synchronisation

This can only be used to open videos:

- Recorded in synchronisation using the Quintic Multi Capture software. Video files must be located within the same folder and be named with the suffix _#1.avi, _#2.avi, _#3.avi, _#4.avi.
- Recorded in synchronisation using the Quintic Multi High-Speed/1.3MP/4MP Capture software. Video files must be located within the same folder and be named with the suffix Cam1.avi, Cam2.avi, Cam3.avi, Cam4.avi, Cam5.avi, Cam6.avi.

Go to the '**System**' tab and open the required number of windows (i.e. two, three, four, five or six).

In the main window open the file '**run adidas neutral + D3DCam1.avi**' from the '**Running**' folder. The following message will appear.

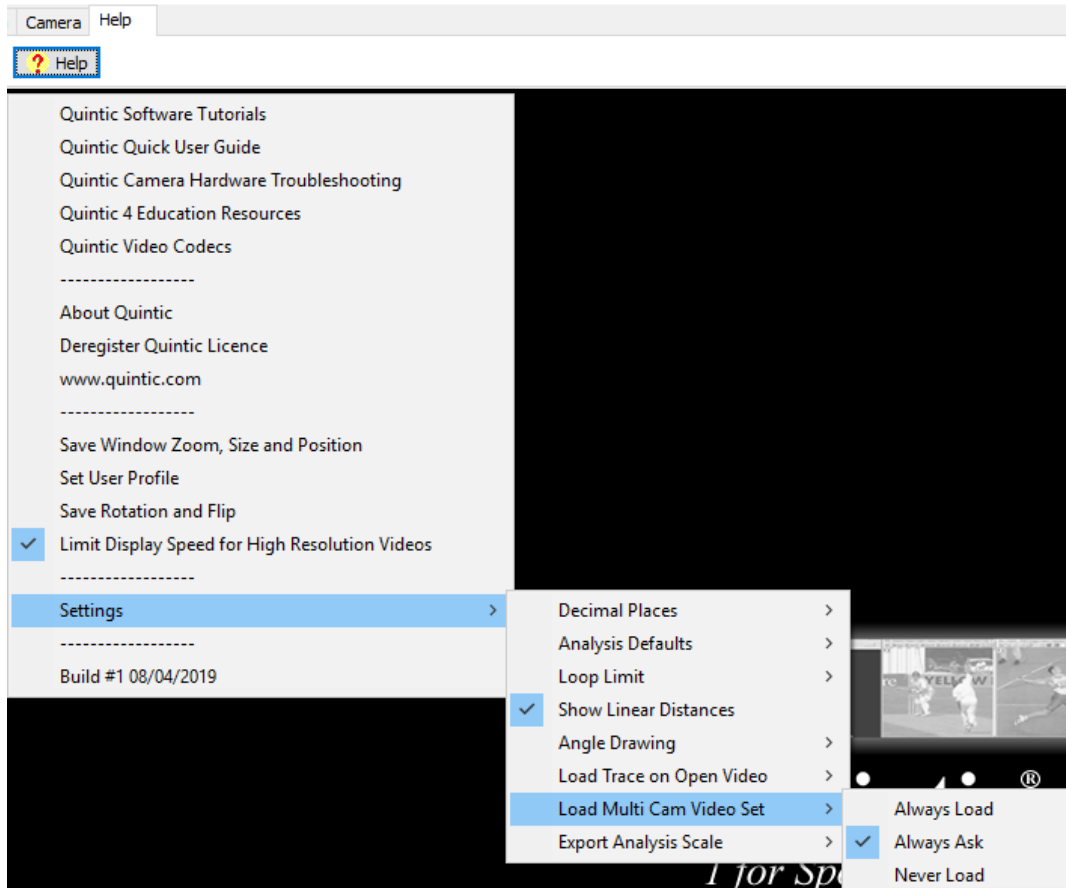


Select '**Yes**' to open all related videos. The videos are automatically synchronised and controlled using the main window. The playback controls in all other playback windows are greyed out.

N.B. For this feature to be available, the 'Cam1.avi' or '_#1.avi' file must be opened in the main window.

N.B. Opening a new video file, in any of the viewing windows, will cause you to lose the synchronisation. It is then possible to manually synchronise the new video at the same key event (heel strike etc).

Users have the option to turn off the information window that pops up when loading a multi camera video set. The user has the options to 'Always Load', 'Always Ask' or 'Never Load' a multi cam video set. The user is able to select their preferred option by going through the Help tab, then Help, Settings, Load Multi Cam Video Set, then choosing their preferred option (Highlighted below).



3. Blend

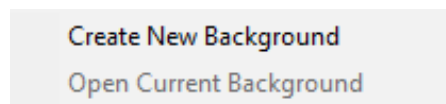
The blend function allows the user to break down a movement by taking several still jpegs throughout the video and saving them as background images. The saved background images can be seen faintly on screen while the rest of the video plays through, allowing the coach/athlete to see differences in body position throughout the technique.

Open '**Bowling Back View**' from the '**Cricket**' folder in the main window.

Click on the '**Blend**' tab.



Pause the video at frame 1 and now click on the '**Blend**' button. This will show the following text box. Click on '**Create New Background**'



Once you have selected Create New Background, the Add Button will become live.



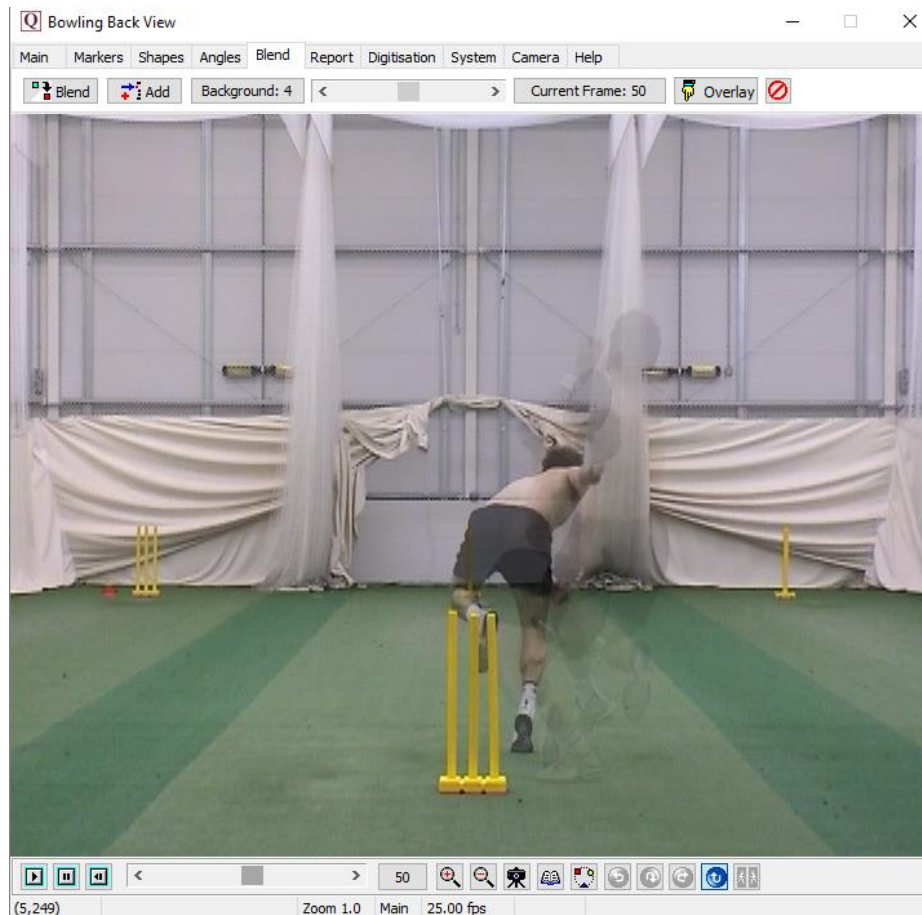
Simply press the '**Add**' button at every frame you would like to add a new background.

Once that frame has been saved as a background, advance the video to the next frame you wish to set as a background and click the '**Add**' button. You can repeat these steps to add as many background frames as required.

As soon as you add background images, the background image counter will increase, telling you how many background images you have added e.g. if you have added 5 backgrounds, the counter will read 5.

Background: 5

The illustration below shows background frames saved at frames 34, 40, 45 and 50.




Once the backgrounds have been saved, the blend scroll bar can be used to change the dominance of the background frames. Scroll the scroll bar nearer the **'Background'** to make the background jpegs more dominant or scroll it towards the **'Current Frame'** to make the current video frame more dominant.



↑
Scroll the bar towards the **'Background'** to show more of the background images. Clicking the background button will move the bar to this end of the scroll bar.

↑
Scroll the bar towards the **'Current Frame'** to show more of the current video. Clicking the current frame button will move the bar to this end of the scroll bar.

If the scroll bar is positioned in the middle, the background frames will appear faintly on the screen whilst the video plays through.

The Reset button will clear all of the background images. 

Synchronise Blend

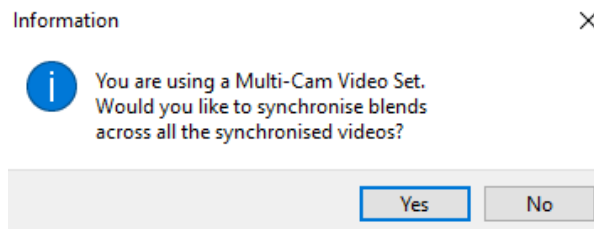
If you have more than one video open within Quintic software and it is synchronised (either Manually or Automatically), the user is able to blend images in synchronisation across the different videos.

This can be done by pressing the 'Blend' button within the Blend Tab.

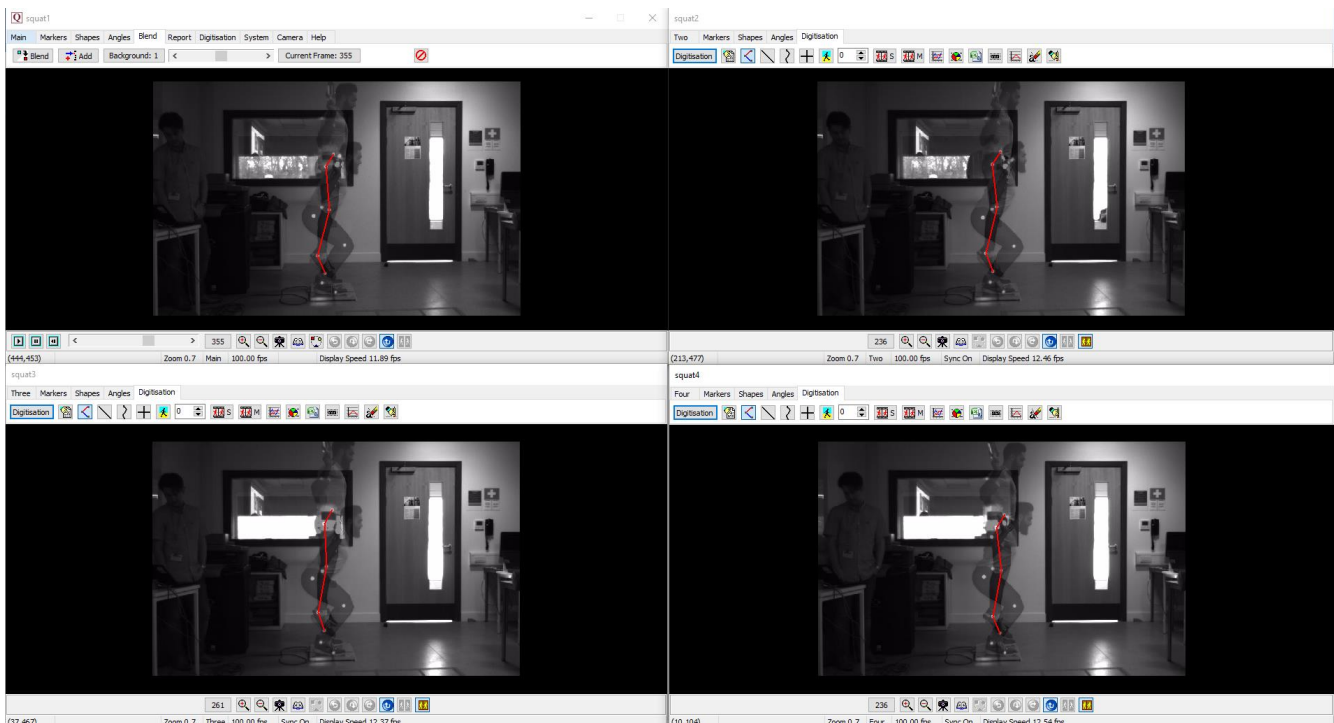
Click on '**Create New Background**'

Create New Background
Open Current Background

As your videos are synchronised, the following pop up window will appear. Simply click 'Yes' if you would like to synchronised blends across all the synchronised videos, or 'No' if you do not wish to do so.



If Yes is clicked, simply press the '**Add**' button at every frame you would like to create a new background in the main window. This will then trigger a blend background addition in all windows. Please see below for an example of Synchronise Blend in use.

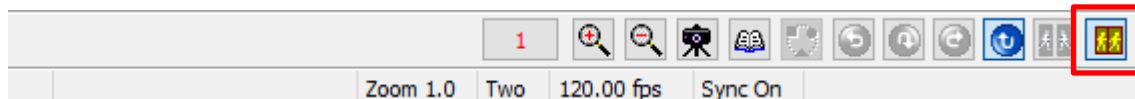


4. Overlay

The blend function allows the user to analyse one video at a time, whereas the Overlay function allows two synchronised videos to be played over the top of each other.

Open '**Javelin Steve Backley – Front View**' in the main window and '**Javelin – Nick Nieland - Front View**' in the second window.

Scroll to the point of right foot landing in both videos (frame 141 in the main window and frame 118 in the second window). Click on the synchronise button to synchronise the videos at this point.



Now select the '**Blend**' tab and click on '**Overlay**'. The second window will disappear and both videos will be overlaid on top of each other on one screen.



When you play the video now using the controls at the bottom of the window you will be able to see both video clips on top of each other. The image from the second window will be the 'background' clip and the image from the main window will be the 'overlay' clip. In the same way as with the blend function you can adjust the prominence of each image with the blend scroll bar and the '**Background**' and '**Current Frame**' buttons.

To exit this screen you must first click '**Reset**'. This will release you from the overlay function and allow you to use other functions.



GO TO QUESTION 8 AND 9 ON THE QUESTION SHEET (PAGE 15 - 17)

Question Sheet

QUESTIONS

1) Open the following videos. For each one state whether the vertical mode or horizontal mode are more appropriate for viewing them or whether they are viewed equally as well in both. (*Hint: Watch the whole clip through in both modes before deciding on your answer*)

Video	Best in Vertical	Best in Horizontal	Both
Sprint Start – Side-on			
Rugby Drop Punt			
Boxing UC Shot			
Cricket – Bowling SV			
Trampoline 2.5 twist			

(5)

Think of 6 other sports actions that could be seen completely in the Vertical and Horizontal Mode.

Vertical

Horizontal

- | | |
|---------|-------|
| 1)..... | |
| 2)..... | |
| 3)..... | |

(6)

Open the video clip ‘**Drop-punt right**’ from the ‘**Rugby**’ Folder.

2) You are a PE teacher; describe this skill to a beginner. They are right handed.

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(5)

3) Now, imagine you are teaching this skill to a left-handed person. Write down how you would describe the movement to them.

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(5)

4) In the video clip '**Drop-punt right**' from the '**Rugby**' folder use the flip function on the video.

(i) Use this mirror-image to write a description of the skill to the left-hander you are teaching.

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(4)

(ii) Was it easier to write this description than your answer to question 4? Explain your answer.

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(3)

5. A) Open the video '**Boxing UC shot**' from the '**Boxing**' folder in the main window.
B) Open the video '**Boxing arm shot**' from the '**Boxing**' folder in the second window.
C) First look at the video in the main window. Match up the frames with the correct description of the action you can see in them. The first one has been done for you.

Frame 23	Contact
Frame 28	Shoulder angle to vertical = 9°
Frame 30	Glove is at the highest point
Frame 37	Glove is at the lowest point
Frame 27	Hip, shoulder and elbow are in line
Frame 1	Hips furthest forward

(3)

[BACK TO TUTORIAL SHEET \(PAGE 4\)](#)

6) Now look at the video in the second window. Match up the frames with the correct description of the action you can see in them. The first one has been done for you.

Frame 15	Contact
Frame 16	elbow angle reaches 93 degrees
Frame 20	Glove is at the highest point
Frame 13	Glove is at the lowest point
Frame 11	Hip, shoulder and elbow are in line
Frame 18	Hips furthest forward

(3)

7)

(i) Pause both videos at the point of impact (use the video scroll bar to get the exact frame).

(ii) Synchronise the videos.

(iii) Describe any differences you see in:

Path of arm during the movement?

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Angle of the elbow at impact?

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Height of shoulder throughout the movement?

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Angle of the shoulder at impact?

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Path of the hand in the follow-through?

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(10)

BACK TO TUTORIAL SHEET (PAGE 5)

Blend

8)

- (i) Open the video '**Discus Female**' from the '**Athletics**' folder in the main window.
- (ii) Set the background frame at frame 1.
- (iii) Describe the differences you can see in the player's movement between the background and:

Frame 11?

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Frame 20?

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Frame 34?

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Frame 44?

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Frame 54?

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Overlay

9)

(i) Open the video '**Batting - Off-drive - FV**' from the '**Cricket**' folder in the main window.

(ii) Open the video '**Batting - On-drive - FV**' from the '**Cricket**' folder in the second window.

(iii) Synchronise the two videos at ball impact.

(iv) Name 3 differences and 3 similarities you can see between the two shots.

Differences

Similarities

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(6)
(/ 60)