

Multi-camera editing in Roxio VideoWave



The **Multi-Camera Editor** in Roxio® VideoWave lets you create professional-looking video compilations from footage of events that have been captured on different cameras, from different angles.

The easy multi-view workspace lets you synchronize the clips and edit on the fly, as the video clips play back simultaneously—up to *four cameras. With a simple click, you can switch from one video clip to another in the same way a broadcast studio switches from one camera to another to capture a different angle or element of a scene.

Footage can be captured on a wide range of video recording devices, such as action cameras, drone cameras, DSLRs, or smartphones. You can also include audio captured independently on a microphone.

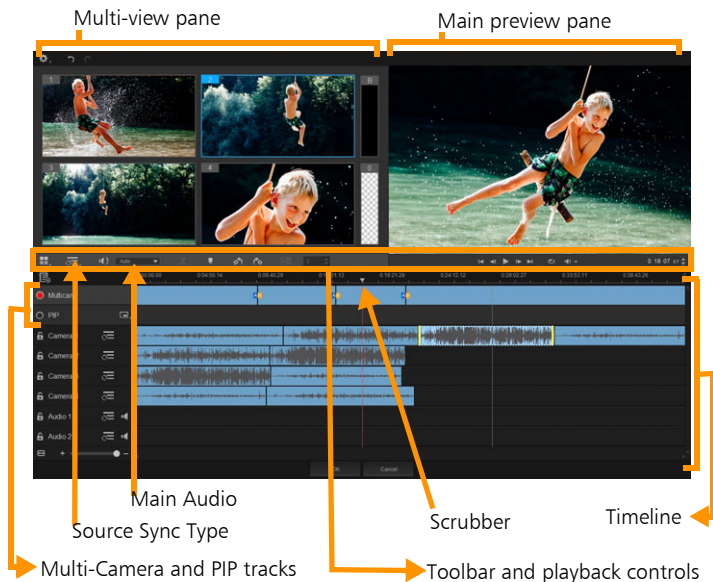
**Number of cameras depends on the version of the software you have.*

This section contains the following topics:

- The Multi-Camera Editor workspace
- Basic steps in multi-camera editing
- Importing video and audio clips into the Multi-Camera Editor
- Synchronizing video and audio clips in multi-camera projects
- Choosing an audio source for your multi-camera project
- Editing multiple clips to create a multi-camera compilation
- Adding picture-in-picture (PIP) in the Multi-Camera Editor
- Managing multi-camera source files
- Saving and exporting your multi-camera project
- Using Smart Proxy with the Multi-Camera Editor

The Multi-Camera Editor workspace


The image below identifies the main features of the Multi-Camera Editor.

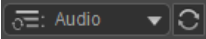



Toolbar, playback, and other controls


The controls found in the workspace are listed below.



The main toolbar includes the following controls:


 **Camera Number** — Lets you set the multi-view pane to show two or four cameras, depending on your version of the software.

 **Source Sync Type** — Lets you synchronize the clips. For more information, see “Synchronizing video and audio clips in multi-camera projects” on page 6.



: Camera 2 ▾ **Main Audio** — Lets you select a preferred audio source. For more information, see “Choosing an audio source for your multi-camera project” on page 8.






 **Split Clip** — Lets you split a clip into segments. For more information, see “To split a clip in the Multi-Camera Editor” on page 12.


  **Set/Remove Marker** — Lets you add markers on the Camera tracks for editing purposes, such as audio synching.


 03 ▾ **Transition and Duration** — Lets you apply a transition between clips in the Multi-Camera track and set the duration for the transition. For more information, see “To add a transition between multi-camera segments” on page 11.

The main preview pane includes the following controls:

  **Rotate Left and Rotate Right** — Let you rotate clips in the Camera tracks before you add them to your Multi-Camera track or your PIP track. Note: Only unlocked tracks can be rotated.


     Playback bar with **Home, Previous Frame, Play, Next Frame, and End** buttons.


 **Loop** — Lets you play the selected track continuously by looping back to the start when it reaches the end.


 ▾ **Set Volume** — Lets you adjust the audio volume for playback.


0:04:40:09 ▾ **Timecode control** — Lets you view and set the time/frame that appears in the main preview pane and where the scrubber is set in the timeline. Click the arrows or a click number value to set a time/frame.


The timeline includes the following controls:


 **Source Manager** — Lets you add and remove clips. For more information, see “Managing multi-camera source files” on page 14.


 **Show/Hide Audio Waveform View** — Lets you view the audio waves for Camera and Audio tracks.

 **Lock/Unlock** — Appears on individual tracks. Locking tracks is recommended after you synchronize them.


 **Include/Exclude from Synchronization** — Lets you determine which tracks are included in the synchronization process.


 **Mute/Unmute** — Lets you turn the audio off (mute) or on (unmute) for the selected audio track.

 **Zoom to Timeline** — Located in the lower left corner of the timeline, this control lets you expand or compress your project so you can view the whole project in the timeline.

 **Zoom Level slider** — Drag the slider or click the **Zoom in** (plus sign) or **Zoom out** (minus sign) to change the zoom level for your project. This is particularly helpful when editing individual segments in the **Multi-Camera** track.

The following general controls appear in the upper-left corner of the application window:

 **Settings** — Lets you access the Proxy Manager and Save As. For more information, see “Using Smart Proxy with the Multi-Camera Editor” on page 15 and “To save your multi-camera project” on page 14.

 **Undo and Redo** — Lets you undo or redo most actions in the Multi-Camera Editor.

Basic steps in multi-camera editing

The following steps provide a basic overview of the multi-camera editing process.

- 1 Import the video and audio clips that you want to use. Typically these are multiple clips that capture the same event, at the same time.
- 2 **Synchronize** the clips across the timeline. You can do this automatically if all the clips have audio, but there are a range of methods you can use for synchronization.
- 3 Choose the audio you want to keep (if you are using the original audio). You can choose a separate audio track as well.
- 4 Start building your multi-camera compilation. You can play all the clips simultaneously, and in the multi-view pane, click the “Camera” that you want to show. You can switch clips as many times as you like. The selected footage displays in the main preview pane. You can then review your project in the **Multi-Camera** track and fine-tune it.
- 5 **Save and exit** the **Multi-Camera Editor** to return to Roxio VideoWave and output the project.

Important! *It's recommended that you finish your multi-camera editing before you exit the **Multi-Camera Editor**. Changes that you make to your project in another editor might not be supported if you re-open the project in the **Multi-Camera Editor**. This means that some changes will be reverted.*

Importing video and audio clips into the Multi-Camera Editor

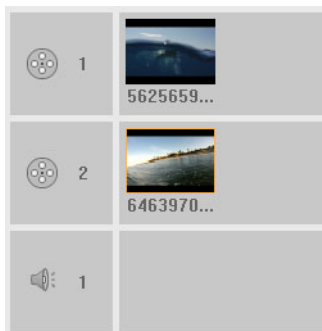
The first step in creating a multi-camera project is to import your clips into the **Multi-Camera Editor**. In most cases, this will be a selection of clips from the same event.

You can work with up to six video clips at one time and include up to two independent audio clips.

To import video clips into the Multi-Camera Editor

- 1 In Roxio VideoWave, click **File > New Multi-Camera Production**.
- 2 In the **Multi-Camera Import** window, navigate to your video and audio files.
- 3 Drag the thumbnails for the files to a corresponding track in the right pane, and click **Next** when done.

The **Multi-Camera Editor** opens.



Drag video (and audio) thumbnails to tracks in the Multi-Camera Import window.

Synchronizing video and audio clips in multi-camera projects





You can synchronize your video and audio clips so that they are all aligned to the same moment in time. The easiest way to do this is to let the **Multi-Camera Editor** analyze the audio for each of the clips and sync the clips automatically. If your recordings are planned, you can use a special audio signal, such as clapping your hands (similar function to using a clapper board in professional shoots). Some events have

natural audio cues that help the sync process, such as music performances or sporting events with a start signal.

You can also synchronize the clips by using markers, shooting time, or you can adjust them manually by dragging the clips in the timeline to the timecode you want. For example, you could use a common visual element, such as a flash to sync videos manually. These methods are helpful if your video footage doesn't include audio or the audio waveforms within the clips are difficult to sync, or you simply prefer to align the clips manually.



In some cases you might need to use a combination of the synchronization options, depending on your source footage.


To synchronize video and audio clips in the Multi-Camera Editor

- 1 After importing your clips to the **Multi-Camera Editor**, choose one of the following options from the **Source Sync Type** drop-list on the toolbar:
 - **Audio** — Click the **Sync** button  next to the drop-list to synchronize the clips in the timeline. Note: Your video clips must include audio to use this option.
 - **Marker** — Select a clip in the timeline, play the clip or scrub to the position you want by using a visual cue, and click the **Set/Remove Marker** button  on the toolbar to add a marker. After a marker has been added to each clip, click the **Sync** button  on the toolbar to align the clips according to the markers.
 - **Shooting Date/Time** — Click the **Sync** button  to synchronize the clips according to the shooting date and time as

indicated by the metadata recorded by the camera. Note: The clocks must be in sync on the cameras to get accurate results.

- **Manual** — In the timeline, drag each clip to the position you want by using a visual cue.

Note: If there are clips that you want to exclude from the synchronization process, click the **Exclude from Synchronization** button  on the corresponding track. Click the button again (**Enable for Synchronization** ) to include the track.

Tip: After you synchronize your clips, you can use the **Lock** buttons  on the individual tracks to ensure that the tracks stay synchronized during the editing process.


Choosing an audio source for your multi-camera project

After you import and synchronize your clips in the **Multi-Camera Editor**, you can make some decisions about the audio for your project. For example, if you have four video clips, and they all include audio, it is recommended that you listen to each clip individually, and choose the one that has the best sound quality. You can also choose to use a separate audio clip.

Other options let you use the audio from all clips, none of the clips, or switch audio (Auto) when you switch cameras, a choice you might make to take advantage of the audio captured with sport or other action footage.

By default, the audio for **Camera 1** is selected.

To choose an audio source for your multi-camera project

- 1 With your clips displaying in the **Multi-Camera Editor** timeline, on the toolbar, click the **Main Audio** box and choose a **Camera** or **Audio** clip. Click **Play**  to listen the quality of the audio for each clip.
- 2 Choose the **Camera** or **Audio** clip that you want to use for your project. The audio from all other tracks will be muted.

Other options include:

- **Auto** — Switches the audio to match the clip that you are playing
- **None** — No audio is included in the multi-camera project.
- **All Cameras** — Plays audio from all clips, simultaneously

Editing multiple clips to create a multi-camera compilation


After you import and synchronize your clips in the **Multi-Camera Editor**, and choose your audio settings, you can start editing your clips to create a multi-camera compilation. The multi-view pane in the **Multi-Camera Editor** helps make this task fun and easy. Much like a DJ switches and blends tracks to create a new music compilation, the **Multi-Camera Editor** lets you visually switch between video tracks and blend them together with transitions.

If you notice that playback is slow or lacks smoothness, you can check the **Smart Proxy** settings. For more information, see “Using Smart Proxy with the Multi-Camera Editor” on page 15.

After you build your basic compilation using the multi-view pane and the main preview pane, you can fine-tune your project in the **Multi-Camera** track and take advantage of editing features, such as transitions and a clip splitting tool. Note that some types of edits, such

as rotating a clip, must be done in the individual **Camera** tracks before you add the clips to your compilation in the **Multi-Camera** track.

To create a multi-camera compilation

- 1 With your clips in the **Multi-Camera Editor** timeline, click the **Play** button  below the main preview pane.

Footage from all cameras can be viewed simultaneously in the multi-view pane.

- 2 To start building your project, as the videos play in the multi-view pane, click the preview for the camera that you want to show.

The footage from the selected camera displays in the main preview pane.




The multi-view pane appears to the left of the main preview pane. Footage from all cameras can be viewed simultaneously in the multi-view pane.

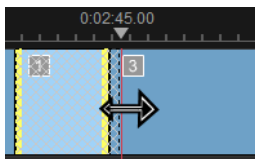
- 3 To switch cameras, click a different camera preview in the multi-view pane. You can switch cameras as many times as you like. You can review your project in the **Multi-Camera** track.



The Multi-Camera track in the timeline displays the camera segments in your compilation.


If you want to adjust the zoom level for the **Multi-Camera** track, drag the zoom level slider  in the lower left corner of the timeline.

- 4 After you have completed a first pass using the multi-view pane, you can refine the timing for a switch in the **Multi-Camera** track by playing your project or scrubbing to the position that you want to edit, clicking a camera segment and dragging the edge until the frame where you want the switch to occur appears in the main preview pane.



To switch a segment in the **Multi-Camera** track to a different **Camera**, right-click the segment and choose a different **Camera** from the context menu or click the camera preview in the multi-view pane.

To add a transition between multi-camera segments

- 1 In the **Multi-Camera** track, click a segment.
- 2 On the toolbar, click the **Transition** button . The button has a yellow outline when active and a transition icon ("AB") appears in the timeline

If the button is grayed out, gently drag the edge of a segment by a small amount to reactivate the button.

A **Crossfade** transition is applied by default.

- 3 On the toolbar, type a time in the **Duration** box for the transition.

Tip: You can add black or blank segments to your project. You can change a segment that is already in the **Multi-Camera** track to a black or a blank by right-clicking the segment and choosing **Black** or **Blank**. You can apply a transition between a video segment and a **Black** segment. To add a black or blank segment while playing your project, instead of clicking a camera preview in the multi-view pane, click the **Black (B)** or **Blank (O)** swatch to the right of the camera previews.



To split a clip in the Multi-Camera Editor

- 1 In the timeline, select a clip in the **Multi-Camera** or **PIP** track and click **Play** or drag the scrubber to the position where you want to make the cut.
- 2 Click the **Split Clip** button.

Note: Splitting a clip is useful when you want to replace part of a segment with a different camera, essentially adding another switch.


Adding picture-in-picture (PIP) in the Multi-Camera Editor


You can add a picture-in-picture (PIP) effect to your multi-camera project. PIP lets you play a video in one area of the screen while the main video plays in the background.



The image above illustrates the concept of picture-in-picture (PIP).


To add a picture-in-picture (PIP) effect to your multi-camera project

- 1 After you create your multi-camera compilation in the **Multi-Camera** track, click the **Play** button  or scrub to the position in the **Multi-Camera** track where you want to add a PIP effect.
- 2 In the timeline, click the circle on the **PIP** track to activate the track.

The circle will have a red fill when active  **PIP**.

- 3 In the multi-view pane, click the preview for the **Camera** you want to use.

The segment is added to the **PIP** track.




- 4 To set the end point for the segment, in the **PIP** track, click the end of the segment and drag it to the position you want in the timeline.
- 5 To choose a corner for the PIP, click the **Change PIP Position** button  on the **PIP** track and choose the position you want.

The PIP position can be seen in the main preview pane.

Managing multi-camera source files

You can use the **Source Manager** to add and remove video and audio clips from tracks in your multi-camera project. You can also view information about the clips, such as the duration of the clip, clip location, and you can lock or unlock tracks.

To add, remove or manage clips with the Source Manager

- 1 In the upper left corner of the timeline, click the **Source Manager** button .
- 2 In the **Source Manager** dialog box, do any of the following:
 - Click the **Lock/Unlock** button for a track to unlock a track for editing or to lock a track to prevent editing.
 - To add a clip to a track, select a track, click the **Add Clips** button , navigate to the clip you want to add, and click **Open**. The clip appears in the numbered list for the track.
 - To delete clips from a track, select a track, in the list of clips for that track, mark the check box next to the clips that you want to delete, and click the **Delete** button .


Saving and exporting your multi-camera project

When you finish building your multi-camera project, you can save it so that it can be edited, exported, and shared from Roxio VideoWave.

Important! *It's recommended that you finish your multi-camera editing before you exit the **Multi-Camera Editor**.*

To save your multi-camera project

- Click the **OK** button at the bottom of the window to save your project to the current name (as indicated in the upper-right corner of the window). This also closes the **Multi-Camera Editor**.

If you want to rename your project, before you exit, click the **Settings** button , choose **Save As**, and type a name in the **Project name** box.

Your multi-camera project appears in Roxio VideoWave.

Using Smart Proxy with the Multi-Camera Editor


The main purpose of **Smart Proxy** is to provide a more fluid editing and previewing experience when working with large, high resolution video files.

Smart Proxy creates lower resolution working copies of larger source files. These smaller files are called “proxy” files. Using proxy files speeds up editing of high resolution projects.

When you render a video project, the original, high-quality video source files are used.


You can use the **Smart Proxy Manager** to enable or disable **Smart Proxy**, change the default resolution threshold that enables **Smart Proxy**, and access the **Smart Proxy File Manager** and **Smart Proxy Queue Manager** to manage existing and future proxy files.

To enable or disable Smart Proxy

- Click the **Settings** button (Multi-Camera Editor)  > **Smart Proxy Manager** > **Enable Smart Proxy**.


Note: The **Smart Proxy** feature is enabled by default if the computer’s hardware can support the feature.

To set the resolution threshold and location for Smart Proxy files

- 1 Click the **Settings** button (Multi-Camera Editor)  > **Smart Proxy Manager** > **Settings**.

- 2 In the **Smart Proxy** dialog box, set a resolution threshold for the creation of proxy files and choose a proxy folder.

To manage proxy files

- 1 Click the **Settings** button (Multi-Camera Editor)  > **Smart Proxy Manager**, and choose one of the following options:
 - **Smart Proxy File Manager** — Lists the source and proxy files. You can use this manager to delete proxy files you no longer need.
 - **Smart Proxy Queue Manager** — Lists source files for which proxy files will be generated (according to the current settings)

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