

# Sync-N-Link X

Sync-N-Link X takes away the time-consuming chore of synchronizing dailies or rushes by batch processing an Event of clips with matching SMPTE/EBU Timecode.

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## Preparing Clips for Syncing

1. Import the video files and audio files into a new Event in **Final Cut Pro X**. Video and audio files must have jam-synced Timecode.
2. If you've got media from more than one day in your Event, confirm the Content Created dates for the clips by choosing **View > Event Browser > Group Clips By > Content Created**. Sync-N-Link X uses the Content Created date to find the audio clip or clips recorded on the same day. The content created date of clips can be changed by selecting a batch of clips and choosing **Modify > Adjust Content Created Date and Time...**  
**Tip:** This is not necessary if your Event has media from a single day.
3. Optionally create a Project with a custom resolution (frame size) to be used for synchronized or multicam clips (see [Preferences](#)).
4. Optionally apply video adjustments, such as spacial conform and LUTs.
5. Optionally change the audio configuration or disable unwanted audio channels in the audio clips. This can be done as a batch by selecting all the audio clips in the Event.
6. Optionally add Camera Angle names. Multicams are created with video angles ordered by Camera Angle or Name, followed by audio angle(s).
7. Optionally add keywords, favorites, rejected or markers. Any keywords/ ratings/markers on the video and audio clips will pass through to the synchronized clips and multicams made by Sync-N-Link X.

## Syncing an Event of Clips

1. Select the Event. Choose the **File** menu and select **Export XML...**  
**IMPORTANT:** Media must be fully imported before exporting XML. You can view the import progress in the Background Tasks window.
2. Choose the Sync-N-Link X **Metadata View** from the popup menu (see [About transferring metadata from clips to Synchronized clips](#) for more information about installing the Metadata View), and name and save the Event XML file. All clips should be online before exporting XML.
3. In **Sync-N-Link X**, click the **Open XML...** button and select the exported Event XML file.

**Tip:** Final Cut Pro 10.3 supports drag-and-drop instead of exporting XML. An alternative to these first 3 steps is to choose the Sync-N-Link X Metadata View from the popup menu in the Inspector, then drag the Event and drop it on the Sync-N-Link X icon in the Dock. (A progress bar in Final Cut Pro X shows the XML being generated in the background.)

4. Choose the options you want for your synchronized clips:
  - Set the popup menu to choose whether to have the synchronized clips named after the video or audio clip names or both.
  - Set the popup menu to choose whether to have metadata from either the video or audio clip or both added to the synchronized clip.
  - You can also choose how the synced clips are trimmed. **Trim clips to common video and audio duration** will create a synchronized clips trimmed to the area where there is both video and audio; **No Trim** will not trim the clips but will add Rejected ranges to the areas with video only or audio only.
  - In cases where the video and audio are out of sync by a few frames, you can apply an adjustment to the audio offset. Enter the offset value into the **Adjust audio offset** entry box.
  - Optionally choose to **Make Multicams**, which can be made as **well as** or **instead of** Synchronized clips.
  - Optionally choose to **Make QuickTime reference movies** for each synchronized clip (see [About the QuickTime Reference Movies](#)).
  - Optionally choose to **Use Track Names from audio iXML for Subrole Names** (if iXML is available in the WAV clips) or edit the subrole names for each audio track. For example tracks A7 and A8 may be renamed "Mixdown" so that in Final Cut Pro X they will have the role Dialogue and the subrole Mixdown. (See [About using iXML information from WAV files](#) and [Controlling Audio Track Playback with Roles](#).)
  - Optionally choose to **Use Subrole Names for audio component names** to have the audio components named after the track's subrole.
5. Click the **Sync Clips...** button to start the process of finding matching audio. Sync-N-Link X will tell you to how many clips it found matching audio for,

how many it didn't, how many multicams were made, and gives you the option to save a report of the details (see [About the Sync-N-Link X Report](#)).

6. In the Save dialog, name your XML file and choose a place to save it.
7. In **Final Cut Pro X**, choose the **File** menu and from the **Import** submenu, select **XML...** Select the XML file saved out of Sync-N-Link X. (Or use the **Import automatically after saving** checkbox to import the file for you.)

Final Cut Pro 10.3 can update the Event: you'll get a dialog saying "**Application Sync-N-Link X sent an XML document that is about to replace existing items with matching names**". Click the **Replace** button to update the original Event with synchronized clips and multicam clips. For earlier versions the synced clips and multicams will be imported into a new Event; this will also happen if you have renamed your FCPX 10.3 .fcpxml file in the Save dialog.

Audio subroles and component names are added to all clips. Multicam clips will be tagged with the keyword "Multicam"; synced clips will be tagged with the keyword "Synced" covering the range where there is both video and audio, and audio components in the synchronized clips are tagged with subroles. Camera audio is disabled in the inspector. The markers, keywords, ratings and metadata from the original clips are added to the synced clips, and notes in the video and audio clips' Notes fields are joined and added to the synced clip's or multicam's Notes field.

Clips that were not used for synced clips are tagged with the keyword "Not Synced".

More control over frame sizes, spatial conform, rendering codec and anamorphic footage is available in the Preferences (see [Preferences](#)).

**NOTE:** If you get an error message from Sync-N-Link X or Final Cut Pro, please email the problem XML file to [SyncNLink@AssistedEditing.com](mailto:SyncNLink@AssistedEditing.com).

## About using iXML information from WAV files

If the WAV files have iXML track names Sync-N-Link X will enable the checkbox **Use Track Names from audio for Subrole Names**. If this is on then the audio components will be tagged with subroles according to the iXML track/microphone names in the WAV file. Each WAV has its own iXML, so if during a shoot the audio had to change channel assignments for a person or character, as long as the new channel assignments are given the updated microphone names, then the subroles will be applied correctly to the channels for that clip.

You can still set the camera audio's subrole name, but the other tracks will be disabled if you're choosing to use the iXML track names.

The role names for the audio components (except for the camera audio) are dimmed because they are being defined from the iXML on a clip-by-clip basis. If you don't want to use the iXML track/microphone names, you can turn off the **Use Track Names from audio for Subrole Names** checkbox to re-enable the subroles naming table. The disadvantage is that these names will be applied globally regardless of any changes to track assignment, whereas iXML track names can change between clips.

Circled and Wild Track metadata from iXML, if available, are added as keywords to the synced clips.

## Multicam workflows

The multicam clips created by Sync-N-Link X from an Event of clips will have multiple angles of video clips and one or more angles of audio clips, synced to timecode.

Alternatively it's possible to make multicams with synchronized clips on each angle by sending Sync-N-Link X an Event of previously synced clips. The workflow is:

- **Export XML** of the Event containing video and audio clips.
- Process the XML through Sync-N-Link X and back into Final Cut Pro X with the **Make Multicams** checkbox 'off' so that only synced clips are created.
- Optionally review and adjust the sync points of the synchronized clips in Final Cut Pro X.
- **Export XML** of the new Event containing synchronized clips.
- Process the XML through Sync-N-Link X and back into Final Cut Pro X with the **Make Multicams** checkbox 'on' so that multicams are created with a synchronized clip on each angle, synced to timecode.

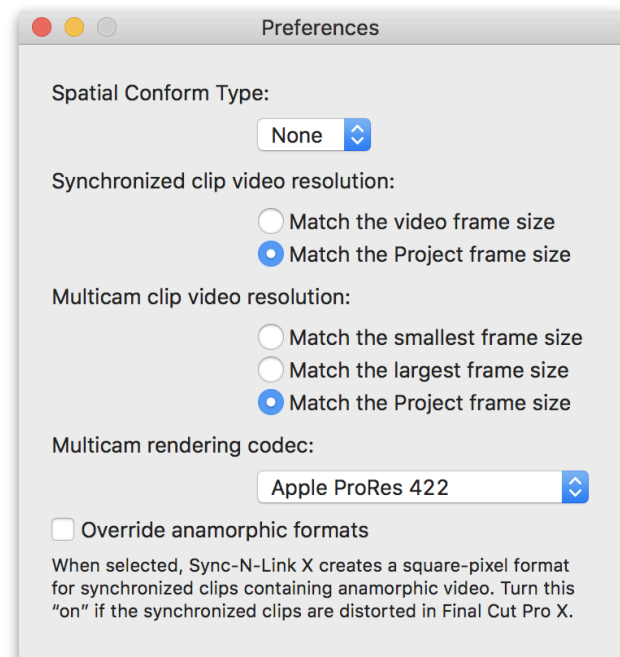
The angles in a multicam clip are named using metadata in the XML from the original clips or synchronized clips. If Camera Angle metadata is available in the XML, that will be used for multicam angle names; if not, Camera Name metadata will be used; if neither of those are in the XML the multicam angles are given the clip names. For more information about getting Camera Angle or Camera Name metadata into the exported XML, see [About transferring metadata from clips to Synchronized and Multicam clips](#).

## Preferences

The Sync-N-Link X Preferences window allows you to set **Spatial Conform Type**, **Synchronized clip video resolution**, **Multicam clip video resolution**, **Multicam rendering codec**, and to **Override anamorphic formats**.

Spatial Conform is applied to the video clips inside a synchronized clip container and in a multicam angle. For example, to create synchronized or multicam clips with a custom resolution, add a Project to your Event, set the frame size and frame rate, and include the Project in your exported XML. In Sync-N-Link X, change the preferences to Spatial Conform Type **None** and video resolutions to **Match the Project frame size**.

Each version of Final Cut Pro X supports some anamorphic formats for synchronized clips, but newer anamorphic formats might create letterboxed or squeezed images in synced clips. As a work-around, Sync-N-Link X can create a square-pixel format for the synced clips that's appropriate for the anamorphic format. (Un-synced clips retain the original anamorphic format.) To enable this feature, turn the **Override anamorphic formats** checkbox "on".



## About transferring metadata from clips to Synchronized and Multicam clips

Metadata in the original clips, such as Content Created, Reel, Scene, Take, Camera Angle and Log Processing, can be included in the exported XML and transferred to the synchronized clips and multicams created by Sync-N-Link X. The easiest way to include this metadata is to install the Sync-N-Link X Metadata View and select it in the Metadata Views popup menu when exporting XML.

1. In Sync-N-Link X, choose the **Help** menu and select **Install Metadata View**.
2. Quit Final Cut Pro X (if it is running) and run Final Cut Pro X.

The Sync-N-Link X metadata view is available in the Info panel of the Inspector, and in the Metadata View popup menu of the Export XML dialog.

See the tutorial at [www.fcp.co/final-cut-pro/tutorials/1542-the-power-of-metadata-views-in-final-cut-pro-x-by-philip-hodgetts](http://www.fcp.co/final-cut-pro/tutorials/1542-the-power-of-metadata-views-in-final-cut-pro-x-by-philip-hodgetts) for more information about customizing metadata views.

## About the Sync-N-Link X Report

Sync-N-Link X can create a detailed report about the clips it was able to sync and those that weren't synced. You can save this report as a text file by clicking the **Save Report** button. Sync-N-Link X will save the report text file and then prompt you to save the XML file.

The top of the report summarizes how many video clips had matching audio found for them, and how many video clips did not have matching audio.

Underneath the summary are listed the details of the video clips that were synced with audio. Example:

*"A013\_C002\_0803FG\_H" was synced with "Z004002.WAV"*

Lastly is a list of video clips that were not synced to audio. If there was no audio captured during a take, Sync-N-Link X will report that it was unable to find audio for the video clip. Example:

*Could not find audio for "A004\_C001\_0803DV\_H"*

## About the QuickTime Reference Movies

If you've chosen to save out QuickTime reference movies, these will be saved to the folder you choose. Since they are pointers to media files the reference movies are small and very fast to save.

For R3D workflows, use [REDCINE-X PRO](#) to export F (full size) QuickTime wrappers. These aren't used by Final Cut Pro X but are only needed to make the reference movies. Sync-N-Link X will create reference movies pointing to the full frame size QuickTime wrapper and the audio files.

Each QuickTime movie contains the duration of the video with timecode synced external audio. Any audio tracks in the video file are removed in the reference movie so that only the external audio is heard.

The movies can be further processed by Compressor or other workflows to create media files for DVD or web-based reviewing.

## About Video Frame Sizes and Synchronized Clips

In Final Cut Pro 10.0.9 and earlier (which does not support custom frame sizes), synchronized clips are a type of compound clip so their video resolution has to be one of the standard frame sizes supported by Projects and Compound Clips. If you are creating proxies outside of Final Cut Pro X it is possible to create them with a non-standard frame size. For non-standard video frame sizes, Sync-N-Link X will choose a synchronized clip resolution with the largest frame size that is smaller than the proxy's width, and chooses either an exact match for pixel aspect or whatever is closest. For example, with 2400x1350 proxies Sync-N-Link X creates synchronized clips at 2048x1152.

This does not apply to Final Cut Pro 10.1. But for 10.0.9 and earlier, proxy clips should be transcoded into video frame sizes supported by your version of Final Cut Pro X:

- 640x480,
- 720x480,
- 720x486,
- 720x576,
- 960x540,
- 960x720,
- 1280x720,
- 1280x1080,
- 1440x1080,
- 1920x1080,
- 2048x1024,
- 2048x1080,
- 2048x1152,
- 2048x1536,
- 2048x1556,
- 3840x2160,
- 4096x2048,
- 4096x2160,

- 4096x2304,
- 4096x3112,
- 5120x2160,
- 5120x2560,
- 5120x2700.

## Controlling Audio Track Playback with Roles

If the tracks in the WAV file have been labelled on set, Sync-N-Link X will give you the option of using those labels for the Dialog subroles, along with the subrole name you entered for the Camera track. If not, you can assign names for the audio and camera audio tracks in the Subrole table.

During editorial use Roles to control the audio tracks you want to work with. See [help.apple.com/finalcutpro/mac/#verb71cbcbe](https://help.apple.com/finalcutpro/mac/#verb71cbcbe) for an overview of Roles.

1. Choose the **Window** menu and select **Show Timeline Index**, then click the **Roles** button.
2. Deselect the checkboxes next to the Dialogue subroles you don't want to hear.