

The first time you attempt to preview a composition, chances are it will play slower than real time (top) as it renders and caches all the frames. The next time those frames are previewed, they are more likely to play in real time (above).

Previewing

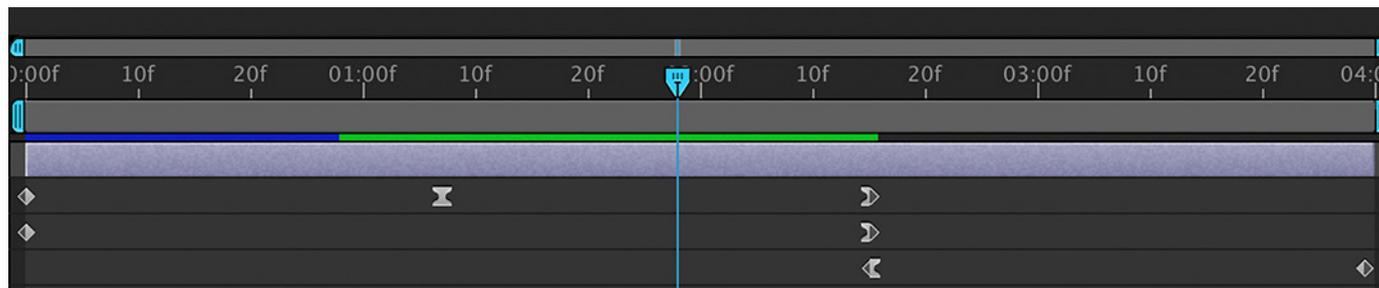
You will often want to preview your animation inside After Effects playing at normal speed (displayed as “realtime” in the Info panel) to check your work before you render. Previewing was overhauled extensively in After Effects CC 2015, offering more interactivity as well as user customization.

Caching

In general, most of the preview behaviors will attempt to play back your composition in real time. However, After Effects may not be able to do so during the first playback pass – especially if After Effects has not had the opportunity to cache the frames in the composition.

Whenever you move the current time indicator to a new frame, After Effects must calculate the result of combining your various layers and any effects applied to them. The result is displayed in the Composition panel and saved to your computer’s RAM (Random Access Memory). A green line segment will appear below the Work Area Bar to indicate this frame has been cached. The next time you locate to this point in time, rather than recalculate the frame from scratch, it will be retrieved from RAM, which is much faster.

If your RAM fills up with cached frames, the ones that took a long time to render will be saved to a disk cache. This is indicated by a blue cache bar segment. When you close a project, all of the render-intensive cached frames are stored in this disk cache. Its location and size is set in Preferences > Disk and Media Cache; assigning it to your fastest drive will reduce the time needed to retrieve previously cached frames, making After Effects more responsive. You can also empty the disk cache from this same dialog.



A blue cache bar indicates a frame has been saved to disk; a green bar indicates it has been loaded into RAM. A blank bar indicates those frames have not been cached, perhaps because an edit was made during that segment of time (such as the last keyframe at the end of this timeline).

Whenever you change the contents of a composition, this “invalidates” the cache and you will see your blue or green cache bars disappear.

If you ever return your composition to a previously cached state (for example, when you undo after a change you did not like), After Effects will search through your disk cache to see if those frames are still available to be retrieved.

Work Area

As your compositions grow to be longer than a few seconds, you may want to focus on individual chunks of time within them rather than always previewing the entire length of the comp. That user-defined chunk of time is known as the *work area*.

The Work Area Bar appears between the stack of individual layers and the time markings in the Timeline panel. You can adjust its length by dragging its blue end caps or by placing the current time indicator at the desired frame and pressing **B** to define the beginning of the work area and **N** to define its end. The preview modes interact with this work area, as well as other functions such as rendering.

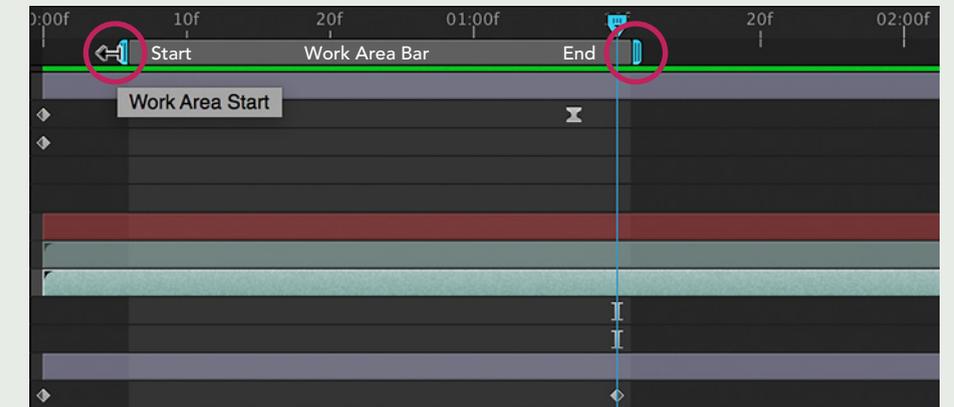
Click and drag the middle of the Work Area Bar to move it along the timeline while keeping its duration intact. If you move the current time indicator later than the end of the work area, pressing **B** will slide the entire Work Area Bar to begin at the current time; otherwise, **B** and **N** will trim it. Double-clicking the middle of the Work Area Bar resets the work area to equal the entire length of the comp.

Work Area Options

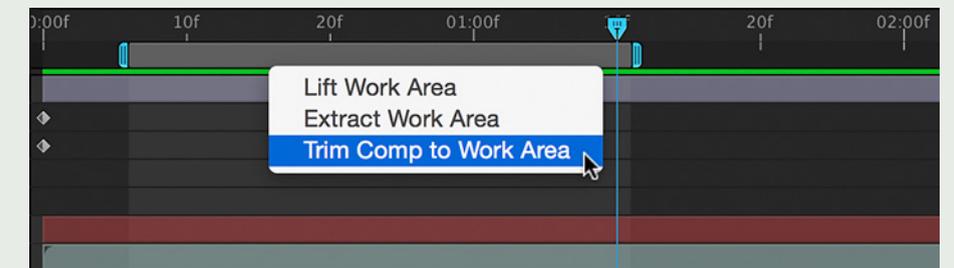
Right-clicking the middle of the Work Area Bar presents additional options:

Lift Work Area creates a blank area in the middle of your comp. This function splits and trims any layer bars inside the work area so they stop playing at the work area’s beginning and resume at the work area’s end. The duration of the comp is not changed and the layers are not moved in time.

Extract Work Area is similar to Lift Work Area, but instead of leaving a blank area in the middle of your comp, this function deletes that segment of time from the com-



The Work Area Bar is displayed just below the time markings in the Timeline panel. You can scrub its ends to trim it or use the shortcut keys **B** and **N** to set the beginning and end of the work area to the current time, respectively. Double-clicking the bar returns the work area to the full length of the composition.



Right-click on the middle of the Work Area Bar to view additional options. Trim Comp to Work Area is particularly useful as it can remove space from the beginning of the composition; changing the Duration in Composition Settings only affects the ending frames.

position. Any layers or remaining fragments of layers after the work area’s end are slid earlier in time by the duration of the work area, and the composition itself is shortened by the same amount.

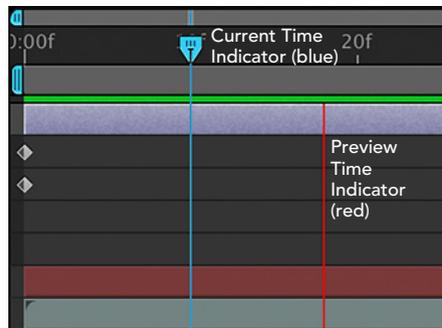
Trim Comp to Work Area is the opposite of Extract Work Area: Any layer segments before the work area’s beginning and after its end are deleted and the comp is shortened to the work area’s duration. The time

of the work area’s beginning also becomes the time assigned to the first frame of your trimmed composition (this is known as the Start Timecode; it can be changed in Composition > Composition Settings). One way of working is to initially create a composition that is longer than needed, build your animation, and then trim the comp to just the segment you decide to keep, using Trim Comp to Work Area.



Escape Key to Stop Previewing

Esc is the “emergency stop” key to press to immediately stop a preview. It ignores the state of the cache and returns the current time indicator to its original position.



During preview, you will see two time indicators: the blue current time indicator (where edits take place) and the red preview time indicator (the frame currently displayed in the Comp panel). Pressing **Spacebar** to stop a preview causes the blue current time indicator to jump to the blue preview indicator’s current position; pressing **Numpad 0** leaves it at its original position.

Common Preview Behaviors

After Effects reserves several different key combinations to start and stop previews and allows you to customize the behavior of each one. We’re going to focus on the “Play From” and “Range” behavior of the two most common shortcut keys used to start a preview. Throughout this book, when we instruct you to preview your work, press one of these keys:

Spacebar Playback will start from the current time indicator and will loop (repeat) the segment of time defined by the work area (plus some extra if the current time indicator was initially outside of the work area).

Numpad 0 When pressing **0** on the numeric keypad on an extended keyboard, playback will start from the beginning of the work area and will loop the segment of time defined by the work area. (Mac users: If you don’t have an extended keyboard, you may press **Ctrl 0**.)

During preview, a second red preview time indicator will appear in addition to the blue current time indicator. The red indicator shows which frame is currently being played.

These two keys also have different behaviors to stop a preview:

Spacebar Playback will stop and the current time indicator will move to the time of the preview indicator when you stopped playback.

Numpad 0 If all of the frames inside the work area have been cached, playback will stop. If the frames have not all been cached yet, then just the already cached frames will loop; you will need to press **Numpad 0** again to stop playback. In either case, the current time indicator keeps its original time.

As of After Effects CC 2015, you can edit your composition while a preview is still playing. If you need to move the current time indicator without stopping playback, press and hold the **Shift** key while dragging its head – otherwise, playback will stop. Of course, if you change the contents of your comp, you will invalidate your cache, and playback will most likely slow down while it is recalculated.

Customizing Preview

There are a total of six different preview start and stop keys, each with their own programmable behavior. To expose these options, drag open the Preview panel to its full height. The Shortcut menu near the top sets which key’s options are currently being displayed. Here are some of the more interesting functions beyond Range and Play From:

Include is a set of three switches that indicate whether video, audio, and graphic overlaps such as mask and motion paths will be included in the preview. You’ll notice that the preview shortcuts that use **Numpad 0** (decimal point) disable the

video switch, playing just audio. We suggest you enable the third one (Show Overlays) for the **Shift Spacebar** preview.

Cache Before Playback allows you to calculate the RAM cache for the entire preview area before playback starts, avoiding the annoyance of a preview that’s not playing in real time. Some users enable this for their **Numpad 0** preview to replicate the previous preview behavior in After Effects.

Skip provides the option of calculating and playing fewer frames during a preview to reduce time spent waiting for the cache to fill. The preview shortcut **Shift Numpad 0** sets Skip to 1, meaning every other frame is calculated and played.

Full Screen automatically maximizes the viewer to 100% (or larger, on high-resolution displays) and surrounds it with gray to reduce distractions – great for when the client is watching over your shoulder.

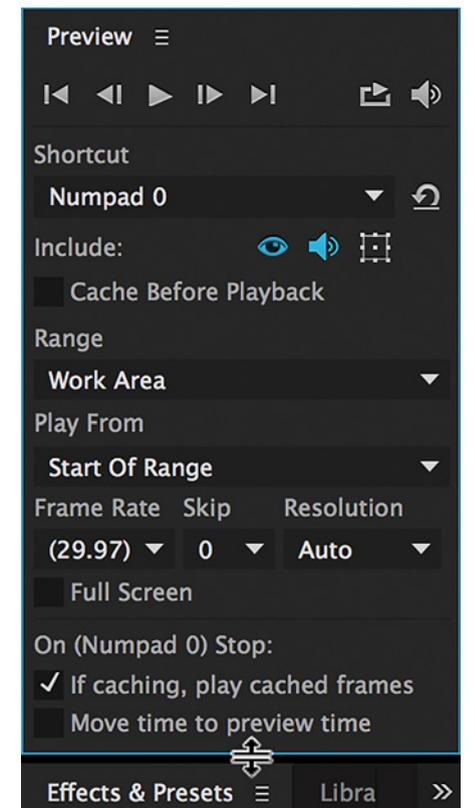
If Caching, Play Cached Frames underneath **Stop** was described earlier: If enabled, this means the first time you try to stop a preview may result in After Effects playing a shortened version of the requested Range instead.

During the life of After Effects CC 2015, Adobe has regularly tweaked these defaults as well as the options available in the Preview panel; we would not be surprised if they changed again after this book is published. But after reading this section, you should have a good idea of the general behaviors; just study the contents of the Preview panel to better understand exactly what After Effects is doing.

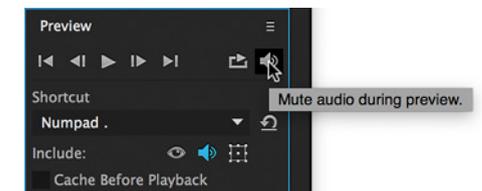
Previewing Audio

If your composition has audio, it will play smoothly only if your preview is running at normal speed (displayed as “realtime” in the Info panel). If the preview is playing slower than real time – even by a slight amount – the audio will either stutter or go silent (mute). This choice is set in Preferences > Previews > Audio. You may also temporarily mute the audio by clicking on the Mute Audio During Preview button at the top right of the Preview panel.

There will be occasions when you want to listen to the audio without worrying about video playback – for example, when locating specific words or musical events that you would like to synchronize an edit or keyframe to. In this situation, press **Numpad .** (decimal point) to start an audio-only preview (Mac users with a numeric keypad may press **Ctrl .**). After Effects quickly caches the audio internally and playback will begin almost immediately. The audio preview duration is not controlled by the normal preview range. “Spotting” audio using this technique is demonstrated in Lesson 5.



Drag the bottom of the Preview panel to reveal the extensive options you can set for each of six different preview start/stop keys. Hover your cursor over each choice to open a tooltip with a useful description.



If you do not like the default “stuttering” behavior of audio during a slow preview, you may temporarily mute the audio by clicking the Mute Audio During Preview button in the Preview panel (above), or enable the Preference > Previews > Audio: Mute Audio When Preview Is Not Real-time (below).

