Pinnacle Studio 9 Plus is a new Studio release with several enhancements, and this chapter describes the three that are most important. Note that these features are not available on all versions of Studio, just the new Studio 9 Plus release.

Two of the new features relate to the addition of a second audio/video track, called an “Overlay” track, which appears beneath Studio’s original Video track. One is called picture-in-picture, or P-I-P, where the video from the Overlay track displays in a small window within the video from the Video track. Alternatively, using a feature called Chroma key, you can superimpose segments of the video in the Overlay track over the video in the Video track.

Studio Plus now allows you to add motion to still images in your project. Specifically, you can pan around within your image, or zoom into or away from your image. These features are typically called pan and zoom effects, or Ken Burns effects, after the director who popularized their use in documentaries like The Civil War and Baseball.

These three features add a wealth of creative possibilities to your Studio Plus productions. This chapter details when and how to use them, with references back to the Pinnacle Studio 9 for Windows: Visual QuickStart Guide.
About the Overlay Track

Let’s discuss the Overlay track, shown in Figure P.1. As you can see, the Overlay track includes both a video and an audio track and sits directly below the original Video and Audio tracks.

Note that the Overlay track doesn’t appear until you drop a video file into it, described below. This makes it hard to distinguish Studio Plus from the regular Studio program that doesn’t offer this feature. If you’re not sure which one you have, check the version name in the bar above the program. As shown in Figure P1, this version is Pinnacle Studio 9 Plus. If your version says only Pinnacle Studio 9, you can’t access the Overlay track.

Figure P.1 The most significant change in Studio Plus is the addition of a separate Overlay track for audio and video.
In Figure P.1, the Video track contains a video of my mother, pregnant with my older brother sometime last century. The Overlay track contains a much more contemporary video of my father. However, only the video of my father shows in the Player.

This reflects how Overlay tracks function in video editing programs. Specifically, though an Overlay track may sit below the Video track on the timeline, video from that track always sits above the video in the main Video track when the video is produced.

Unless you use a technique like Picture-in-Picture or Chroma key to merge the two streams, only the video in the Overlay track will show in the final production. Accordingly, when discussing the two tracks, I’ll refer to the video in the Video track as the Background video, and the video in the Overlay track as the Overlay video.

Note that once you import an Overlay video, you’ll probably have to adjust the volume of one or both Audio tracks to produce the desired effect. See “Using the Volume Tool” in Chapter 11, to learn about Studio’s options for adjusting volume.

To open the Overlay track:

1. Insert a video into the Video track.

2. On the Video Scenes tab, hold down the mouse button and select one or more contiguous or noncontiguous scenes (Figure P.2).

   The borders turn from white to blue, and a small hand appears over the scenes.

   continues on next page
3. Drag the scenes to the target position on the Overlay track. A small plus sign appears below the pointer and a green vertical line marks the position of the video on the Overlay track.

4. Release the mouse button. Studio Plus inserts the scenes into the Overlay track and creates a new Title track (Figure P.3).

✔ Tips

- You can edit videos in the Overlay track exactly like those in the Video track, including trimming and applying special effects.
- Unlike videos on the Video track, which always snap to the left to close any gaps in the timeline, you can place a video on the Overlay track at any location.

Figure P.3 Here are the new audio and video Overlay tracks.
Applying Picture-in-Picture Effects

Picture-in-picture (P-I-P) effects add a great visual element to your projects. Here, I’m producing a video of my father’s life, primarily using videos from an interview I recently shot. While editing the video, I’m weaving in older videos converted from 8 mm film shot back in the day. In this example, he talks about my mother being pregnant with their first child, my older brother, and I’m using the P-I-P effect so viewers can see both him and the older, background video simultaneously.

You need to make four basic decisions about inserting a P-I-P:

1. The size and position of the P-I-P window.
2. The size and appearance of the border around the P-I-P, which helps visually distinguish the P-I-P from the Background video.
3. The size and appearance of the P-I-P shadow—another alternative for setting the P-I-P off from the Background video.
4. Whether to customize the transparency of the P-I-P video.
To apply a P-I-P effect:

1. Select the Overlay video.

2. At the upper left of the Movie window, click the Open/Close Video Toolbox icon (Figure P.4).
   The Video Toolbox opens.

3. On the left side of the toolbox, click the Edit the Video Overlay Using Picture-in-Picture or Chroma Keying icon (Figure P.5).
   Studio Plus opens the Video Toolbox with the Picture-in-Picture controls tab showing. At this point, as long as the Enable Picture-in-Picture checkbox is enabled (the default option), Studio Plus applies the P-I-P effect.

✓ Tips

■ Note the P-I-P effect in the Player on the right in Figure P.5. This is where you’ll preview all of your edits to the P-I-P window as well as the border and shadow attributes.

■ To apply the selected P-I-P values to all clips subsequently placed on the Overlay track, click the Apply to New Clips checkbox in Figure P.5.
To customize P-I-P size and location:

- To customize the size and the location of the P-I-P, do one or more of the following:
  - In the Presets drop-down list, select a preset (Figure P.6).
  - Position the cursor above the P-I-P and drag it to the target location (Figure P.7).
  - Position the cursor over any control point in the bounding box and drag the P-I-P to the target size (Figure P.8).

✔ Tips

- When selecting the size and position of your P-I-P, use the Timeline scrubber to move through the Background video to ensure that you don’t obscure any critical regions in the video. I typically use the same exact positioning (and other parameters) throughout my productions.

- When positioning your P-I-P, remember that the extreme edges of the video don’t show when displayed on a television set. If you’re writing your project back to DV tape, or producing a DVD, you should beware of the Title-safe zones shown in Figure 10.12 (page 262) and explained on page 263.
To customize the P-I-P border:

1. To choose border color, click the solid-colored box beneath the Color text label (Figure P.9).
   Studio Plus’s Color selection dialog box opens (Figure P.10).

2. Choose the desired color by selecting it from the Basic colors or Custom colors palette or by clicking a color on the spectrum.

3. If you want, save your custom color by clicking the Add to Custom Colors button (Ctrl+A). Saving your custom color helps you maintain uniformity as you work.

4. Click OK to close the dialog box.

5. Use the control sliders in the Border box to adjust border width, transparency, and softness.

6. Click the Rounded Corners checkbox to round the corners of the border.

✔ Tips

■ In addition to choosing the border color via the Color dialog, you can also click the eyedropper beneath the Color text label and then click the desired color in the video showing in the Player (Figure P.11).

■ While there are no hard and fast rules regarding P-I-P border width, I typically keep them very slender, just enough to set the P-I-P video off from the Background video.

■ When selecting P-I-P color, I try to match the occasion and mood of the video. For a child’s birthday video, orange or yellow is fine; here, for a more serious video, I’ve selected a very dark blue.
I almost always soften the edges of my P-I-Ps with both softness and transparency controls. Otherwise, the edges of the P-I-P just look too harsh. Figure P.12 shows the P-I-P positioning and configuration options that I ultimately selected for this project.

When applying a P-I-P effect, I usually transition into and out of the effect using a dissolve transition. To learn how to apply transitions to the Overlay track, see “To Fade Into or Out of a Title or Other Element on the Title track” in Chapter 8 (page 205).

Figure P.11 You can also choose your border color by clicking the eyedropper and choosing a color in the Player.

Figure P.12 Here’s my final P-I-P, Dad on Dad, then and now.
To customize the P-I-P Shadow:

1. To choose shadow color, click the solid-colored box beneath the Color text label (Figure P.13).
   Studio Plus’s Color selection dialog box opens (Figure P.10).

2. Choose the desired color by selecting it from the Basic colors or Custom colors palette or by clicking a color on the spectrum.

3. If you want, save your custom color by clicking the Add to Custom Colors button (Ctrl+A). Saving your custom color helps you maintain uniformity as you work.

4. Click OK to close the dialog box.

5. Use the control sliders in the Shadow box to adjust the shadow’s distance from the P-I-P video and its transparency.

6. On the upper right of the Shadow box, click a radio button to move the shadow to a different location around the P-I-P video.

✔ Tips

- In addition to choosing the shadow color via the Color dialog, you can also click the eyedropper beneath the Color text label and then click the desired color in the video showing in the Player.

- Shadows, like borders, are generally used to distinguish the P-I-P from the Background video. For this reason, I recommend using either borders or shadows, but not both, since the double dose can make the P-I-P look a bit garish.
To customize P-I-P transparency:

- The P-I-P slider starts out on the extreme left, which is zero transparency. To customize the transparency of the P-I-P, adjust the Transparency slider to the right, which makes the P-I-P less visible against the Background video (Figure P.14).

To delete the P-I-P effect:

- To delete the P-I-P Effect, *do one or more of the following*:  
  - Uncheck the Enable picture-in-picture checkbox (Figure P.5).  
    Studio Plus deletes the effect and only the Overlay video shows in the Player window.  
  - Delete the Overlay video.  
    Studio Plus deletes the Overlay video and the Background video shows in the Player window.
Accessing Advanced P-I-P Controls

To a degree, Studio Plus’s new P-I-P and Chroma key controls are simply accessible front ends to more advanced controls accessible via the normal special effects interface (see the section “Learning the Special Effects Interface,” Chapter 9, page 229). In the case of P-I-P controls, the advanced interface offers controls that extend your creative opportunities beyond simple P-I-P.

For example, in a recent *PC Magazine* article, I tested different methods for digitizing 8 mm film. As with many technology comparisons, seeing the footage side by side often makes it easy to identify the pros and cons of each product offering.

As shown in Figure P.15, using the advanced Picture-in-Picture controls, which you can apply to both the Video and Overlay tracks, you can crop, resize, and position both tracks in a highly customizable, side-by-side display. This is just one example of the effects enabled with the advanced P-I-P controls.

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**Figure P.15** The advanced P-I-P controls enable advanced effects like placing videos side by side. That’s some snazzy sweater, eh?
To access the advanced P-I-P controls:

- With Studio Plus open to the Picture-in-Picture controls, click the Add an Effect to a Video Clip icon (Figure P.16). Studio Plus opens the controls shown in Figure P.15.
About Chroma Key

The most common application of Chroma keying is on the evening news, when you see the weatherperson standing in front of a weather map. Actually, he or she is videotaped standing in front of a green wall while the weather map is contained in a separate video feed. To combine the two, the video editing program at the TV station eliminates the green background and superimposes the weatherperson over the video containing the weather.

Studio Plus works the same way. After getting the two videos properly placed in the timeline, you tell Studio Plus which color to eliminate from the Overlay video, usually either green or blue. Then Studio Plus superimposes the video that wasn’t eliminated into the Background video.

Software aside, to produce a high-quality Chroma key, you need to shoot your video correctly. For tips on how to do this, see the sidebar, “Shooting For Chroma Key” later in the chapter.
About Chroma Key Controls

Figure P.17 contains Studio Plus’s Chroma key controls. Since they’re unique to the Chroma key operation, I’ll define them before getting started.

◆ **Key Color.** The key color is the color you’re eliminating from the Overlay video before superimposing the remaining segments into the Background video (e.g., the green wall against which the weatherperson is videotaped). As you’ll see, you’ll choose the key color by clicking the eyedropper beneath the Key Color text label, and then clicking the background in the Overlay video.

◆ **Color Tolerance.** When shooting video for Chroma key, you shoot against a solid background, usually either cloth or a painted wall. Though you do your best to minimize them, there are always slight differences in the background color due to shadows or minor irregularities, like small wrinkles or folds in background cloth or dirt or paint strokes on painted walls. Increasing the color tolerance tells Studio Plus to eliminate a broader range of colors, which helps eliminate these irregularities.

◆ **Saturation Minimum.** This control increases and decreases the saturation value eliminated by the Chroma key. During my tests, I consistently produced the best result with this slider set all the way to the left.

◆ **Softness.** According to the Studio Plus help file, this slider controls “the density of the underlying video.” During my tests, I consistently produced the best result with this slider set all the way to the left.

◆ **Spill Suppression.** In most Chroma key projects, some of the background color from the Overlay video “spills” onto the Background video, almost always at the edges between the two videos (e.g., some fringes of the green wall behind the weatherperson spill onto the weather map in the background). Spill suppression turns this spillover to gray, making it much less noticeable. During my tests, I consistently produced the best result with this slider set all the way to the right.

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**Transparency.** This control affects the transparency of the image in the Overlay track. Drag it to the right to make the image more transparent, à la Patrick Swayze in *Ghost.*

**Enable Chroma keying.** This checkbox enables and disables Chroma keying.

**Apply to new clips.** Checking this checkbox applies the same Chroma key values to all subsequent clips dragged into the Overlay track.

**Key channel.** This provides another view of the effectiveness of the Chroma key controls. When the background is completely black and the edges clean, and the foreground clear of black specs, the controls are set to their optimum positions.

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**To apply a Chroma key effect:**

1. Drag the background video clip to the Video track.
2. Drag the clip shot against the Chroma key background to the Overlay track.
3. At the upper left of the Movie window, click the Open/Close Video Toolbox icon (Figure P.4). The Video Toolbox opens.
4. On the left side of the toolbox, click the Edit the Video Overlay Using Picture-in-Picture or Chroma Keying icon (Figure P.5).
5. Click the Chroma key tab above the Key channel window. Studio Plus opens the Chroma key control window (Figure P.18).

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![Figure P.18](image) Now you’re ready to Chroma key out the background.

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**Click the eyedropper.**

**Select a color.**
6. If the Enable Chroma Keying checkbox isn’t enabled, click the checkbox.

7. Click the eyedropper beneath the Key Color text label and click the background color in the Overlay video in the Player. You should see an immediate elimination of most of the background (Figure P.19).

8. Adjust the Color Tolerance slider to the right to eliminate the remaining background color from the combined videos. To find the optimum value, do one or more of the following:
   ▲ Use the slider bar beneath the Player window to scan through the entire Chroma key.
   ▲ Watch for black spots in the white portion of the Key channel as shown on the top in Figure P.20. This indicates that the Color Tolerance value is too high. Adjust the value to the left until the black spots are gone.

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9. Adjust the Saturation Minimum and Softness values all the way to the left.

10. Adjust Spill Suppression all the way to the right.

11. If desired, adjust the Transparency value to the desired levels.

12. If desired, click the Apply to New Clips checkbox to apply the selected values to other clips dragged to the Overlay track.

✓ Tips

- Most Chroma key sets are slightly lighter at the top because this region of the frame is closer to the lights. You can see this in Figure P.18, where the background is lighter at the top than on the bottom. For this reason, I choose a color in the middle of the screen, which provides an average value between the brightest and darkest regions. This maximizes my chances for a high-quality Chroma key.

- Though Studio Plus has two Chroma key presets—one for a blue screen, one for a green screen—I recommend ignoring the presets and starting from scratch, since even small differences in color values between the presets and your actual footage can produce dramatically different results.

- You can apply the P-I-P and Chroma key effects to the same video simultaneously.

- You can access Studio Plus’s advanced Chroma key controls by clicking the Add an Effect to a Video Clip icon (Figure P.21), but the results are nowhere near as exciting as they were for P-I-P. The only additional control is an Invert Key checkbox, which simply reverses the Chroma key, superimposing the region containing the background video color over the background video.

Figure P.21 The only option offered by the advanced Chroma key controls is the Invert key, shown here.
Shooting For Chroma Key

Shooting effective Chroma key video is easier than you think, if you follow a few simple rules.

1. The most important rule is to shoot against a high-quality background in either Chroma key green or blue. You don’t have to spend a lot of money; in fact, the background cloth I used for the shots in this chapter cost around $20 from www.markertek.com. However, it does have to be fabric (or paint) designed specifically for Chroma key effects. A blue or green sheet from Wal-Mart just won’t be as effective.

2. When lighting the background wall, do your best to minimize shadows and make the light as even as possible from top to bottom. Fluorescent bulbs tend to work the best.

3. Use separate lighting on the subject of the Chroma key video, and make sure shadows from those lights don’t appear in the camera.

4. Make sure both the subject and background are very well lit, since shooting with insufficient light produces noise in the video, which degrades Chroma key quality.

5. If you can, hang a light from the top of the back wall that shines down on the subject’s head and shoulders (called a back light). This helps create a good contrast between the subject and the back wall, which improves the quality of the Chroma key.

6. Obviously, the subject shouldn’t wear any colors that are close to the Chroma key color. In addition, remove any shiny jewelry that could reflect the background color.

7. Images with lots of detail are hard to Chroma key effectively. For example, curly hair is almost always a problem. If possible, have your subjects slick back their hair and/or place it in a ponytail to minimize this detail.

8. Shoot using manual exposure controls. When you use automatic exposure, the camera adjusts exposure for small changes in lighting conditions. For example, a subject waving her arm or looking down can produce a change in exposure setting, which of course changes the background color slightly, thus introducing irregularities that degrade the Chroma key.

9. The better the camera, the better the Chroma key. This is one area where having higher-quality equipment can really be beneficial.
Working with Still Images

I like incorporating pictures I shot with my digital camera into my movies. Though possible with Studio, the new tools in Studio Plus offer much greater functionality.

Topping the list, of course, is pan and zoom functionality. However, Pinnacle also added red-eye reduction and image rotation, which when combined with color correction tools already in the program, eliminate the need to edit your photo in an image editor before including it in your video productions.

If you haven’t worked with still images before with Studio, review “Working with Still Images” in Chapter 7 (page 190) before getting started.
Perfecting Your Images

When inserting digital pictures into a project, first make sure that they are right-side up and remove any red eye. So let’s start there.

To rotate your image:

1. Start with the Movie window in Timeline view and the Album window open to the Still Images tab.

2. Drag the image into the Timeline.

3. Double-click the image.

Studio Plus opens the Clip Properties tool (Figure P.22). This is my normally staid father-in-law feigning intoxication at a recent family wedding.

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4. Click the Rotate icons as required to rotate the photo into the desired position (Figure P.23).

Studio Plus rotates the image to the desired position (Figure P.24).

✔ Tips

■ To understand why there are black bars around the image in Figure P.24, see “Editing Still Images” in Chapter 5 (page 115).

■ To remove the black bars, zoom into the image until they disappear, as described in “To insert a pan and zoom effect,” later in this chapter.
To remove red eye in an image:

1. Start with the Movie window in Timeline view and the Album window open to the Still Images tab.

2. Drag the image into the Timeline.

3. Double-click the image.
   Studio Plus opens the Clip Properties tool (Figure P.22).

4. Do one or both of the following to zoom into the region of the image containing the red eye:
   ▲ Use the zoom slider to zoom into the image (Figure P.25).
   ▲ Click and drag the image to the desired position.

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Figure P.25 Use the Zoom slider to zoom into the image and grab the image directly to move it around the frame.
5. Click the Red Eye icon (Figure P.26).
6. Click and drag a rectangle around the eye or eyes containing the red eye (Figure P.27).
Studio Plus removes the red eye (Figure P.28).

✔ Tips

■ Studio Plus worked best for me when I eliminated the red eye from both eyes at once.

■ If two or more subjects in the picture have red eye, fix them sequentially, using the pan cursor to move around the image as necessary.

Figure P.26 Click here to remove red eye.

Figure P.27 Then drag the rectangle around both eyes.

Figure P.28 Works like Visine (though it's not apparent here in the grayscale image).
Inserting Pan and Zoom Effects

At a high level, Studio Plus’s workflow for panning and zooming within an image has two simple steps. First you pick a starting position for the pan and zoom effect, then you choose the end position. When rendering the effect, Studio Plus builds a movie from the starting point of the image to the ending point.

This start-to-finish approach works well with some pictures, but sometimes you’ll want to make more complicated passes through an image. For example, in the image shown in Figure P.29, shot outside historic Dollywood, I want to move to three different locations within the image, from daughter to mother to daughter.

To facilitate this, Studio Plus added a button called Match Previous Clip to simplify multipoint panning within an image. This section demonstrates both single-point and multipoint pan and zoom effects.

To insert a pan and zoom effect:

1. Start with the Movie window in Timeline view and the Album window open to the Still Images tab.
2. Drag the image into the Timeline.
3. Double-click the image.
   Studio Plus opens the Clip Properties tool (Figure P.29).
4. Click the Animate from Start to End checkbox.
   The Set Start button is automatically selected.

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![Figure P.29](image-url)

Now let’s pan and zoom around this image; daughter to mother to daughter.
5. Do one or both of the following to set the start position:
   ▲ Use the Zoom slider to zoom into or away from the image.
   ▲ Click and drag the image to the desired position (Figure P.30).

6. Click the Set End checkbox (Figure P.31). Studio Plus resets the image to its original position.

7. Do one or both of the following to set the end position:
   ▲ Use the Zoom slider to zoom into or away from the image.
   ▲ Click and drag the image to the desired position.

✔ Tip
   ■ At this point, if you exit the Clip Properties window by clicking X in the upper-right corner or closing the Video Toolbox, the pan and zoom effect is set. But I’ve only zoomed into two of the three faces in the picture. To seamlessly zoom into the third image, see below.
To insert multi-point pan and zoom effects:

1. After inserting the first point of the multi-point pan and zoom effect, click the Open/Close Video Toolbox icon (Figure P.4) to close the Video Toolbox.
   
   Studio Plus returns to the Album window open to the Still Images tab.

2. Drag the same image to the Timeline (Figure P.32).

3. Double-click the image. Studio Plus opens the Clip Properties tool (Figure P.33).

4. Click the Animate from Start to End checkbox. The Set Start button is automatically selected.

   continues on next page
5. Click the Match Previous Clip button. Studio Plus matches the Set Start pan and zoom location to the end point of the previous image.

6. Click the Set End checkbox.

7. Do one or both of the following to set the end position:
   ▲ Use the Zoom slider to zoom into or away from the image.
   ▲ Click and drag the image to the desired position (Figure P.34).

✔ Tip

■ At this point, if you exit the Clip Properties window by clicking X in the upper right corner or closing the Video Toolbox, the pan and zoom effect is set.

![Pan and Zoom](image.png)

Figure P.34 Then pan and zoom over to the second daughter.