

Interpreting Basic Raw Adjustments

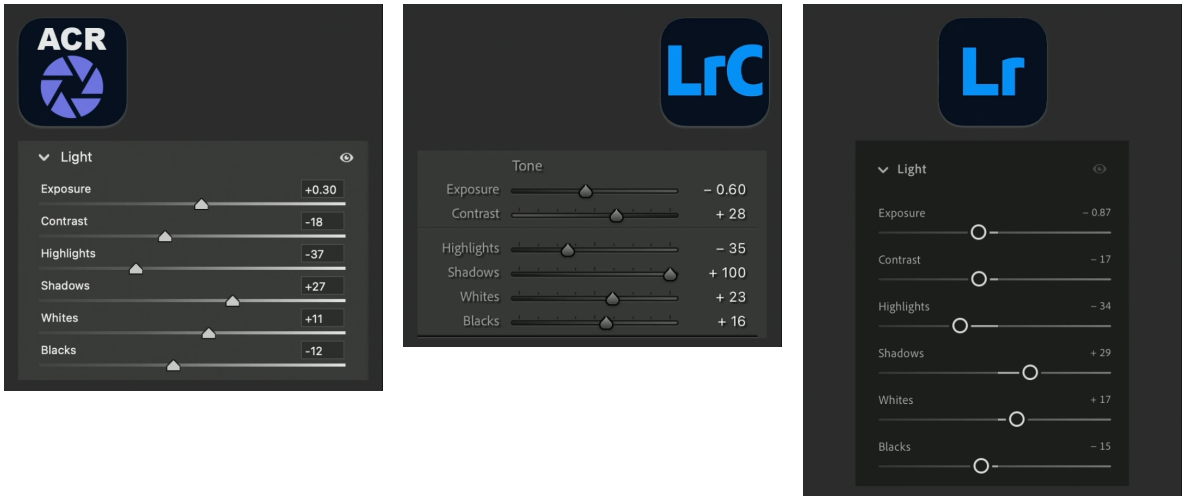
In this lesson we'll take a deeper look at the most foundational sliders in Adobe Camera Raw, Lightroom and Lightroom Classic. Instead of moving sliders on a photo, I compare each slider to the equivalent Curves adjustment in Photoshop. That shows exactly which brightness range each slider changes, how it blends that change into the rest of the image, and where it makes detail easier or harder to see.

Key Concepts

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3. **Positive Whites** (04:14)
4. **Negative Whites** (09:59)
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12. **Exposure** (33:08)
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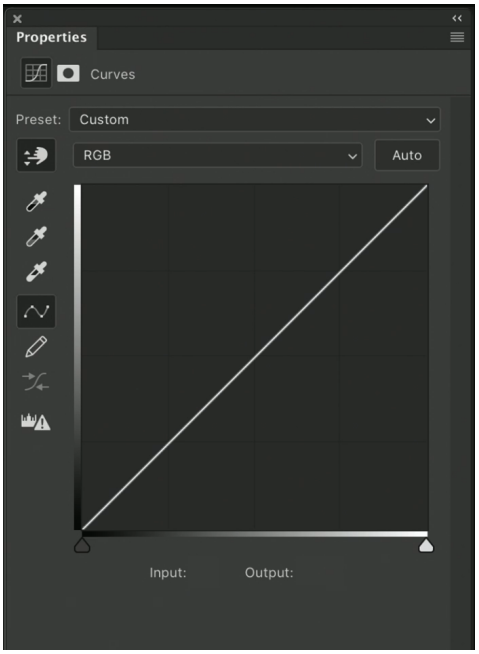
The Basic Sliders (01:15)

These are the six sliders at the top of the adjustments in every raw processor from Adobe. In Adobe Camera Raw they're in the **Light** section, in Lightroom Classic they're in the **Basic** panel, and in Lightroom they're in the **Light** panel. Each app gives them a slightly different look, but the names, the slider ranges and the way they work are identical. (Adobe sometimes introduces a change in Camera Raw first, such as how far a slider can move, but that hasn't happened in this section.)



How to Read a Curve (02:36)

To see what each slider really does, I converted it into the equivalent adjustment in Photoshop's **Curves**. If you're not comfortable with Curves, here's how I interpret it.

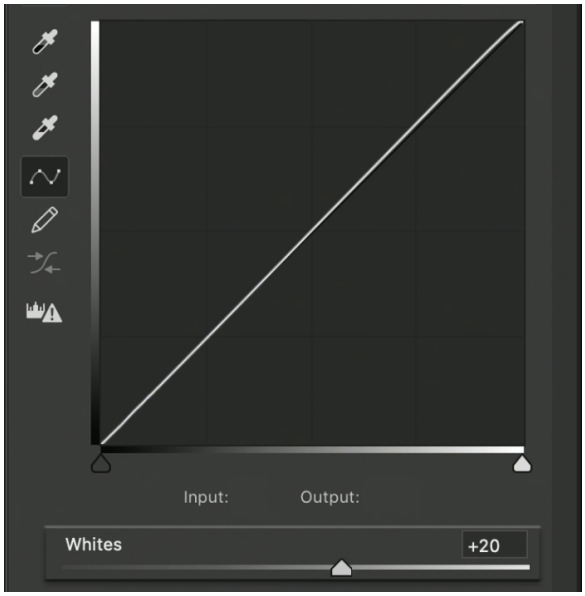


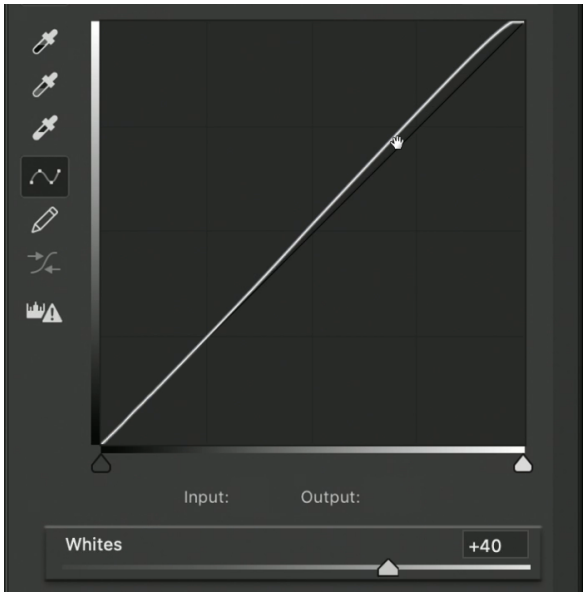
1. **The Bottom Bar:** Shows every brightness level your image can contain, from black on the left to white on the right (ignoring HDR, which can go brighter than white).
2. **The Diagonal Line:** Shows how much light is used to create each of those shades. Black uses no light, so the line starts at the bottom; white uses as much light as possible, so it ends at the top.
3. **Think of a Dimmer Switch:** Where the curve moves above the thin black line (where it started), those shades get brighter. Where it moves below, they get darker.
4. **Look Straight Down:** To find out which shades changed, look straight down from the part of the curve that moved. Wherever the curve sits on the original line, nothing changed.
5. **The Left Bar:** Shows how bright a shade becomes at a given height. If the curve hits the top, you get solid white; if it hits the bottom, you get solid black.
6. **Steepness Means Detail:** Where the curve is steeper than the original line, contrast increases and detail is easier to see. Where it's flatter, detail is harder to see.

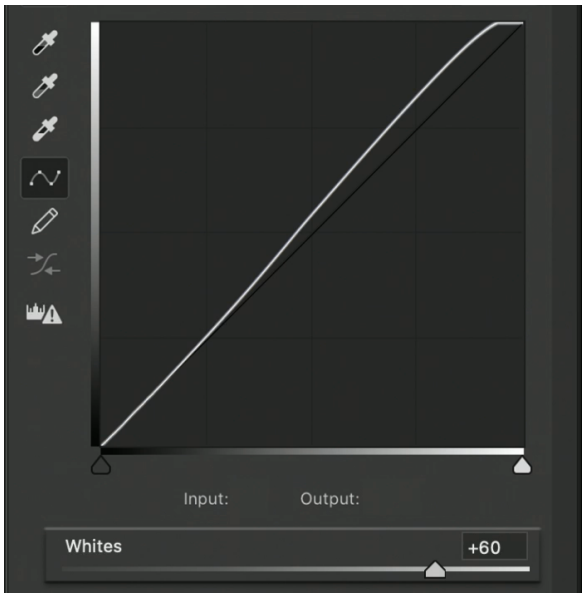
Positive Whites (04:14)

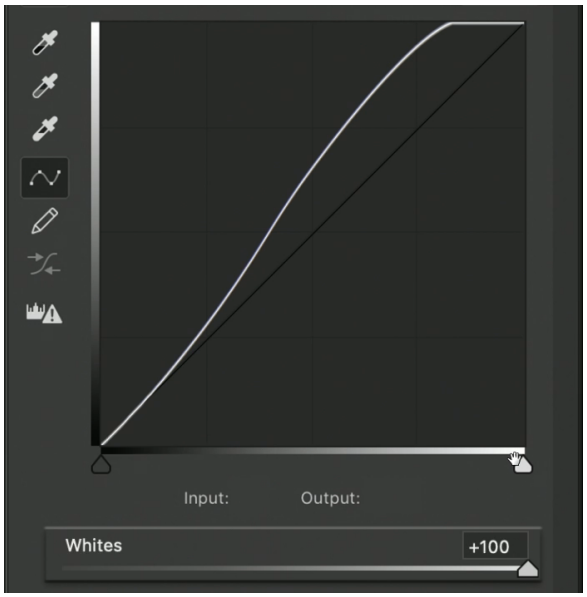
At +20 a tiny part of the curve at the top right goes flat. Shades that used to be 97 to 99% of the way to white now become solid white. Raise the slider further and the flat section gets longer, forcing more of the brightest part of the image to solid white. That's why it's called Whites.

The rest of the curve brightens the lighter shades by less and less as it moves into darker shades, so the change blends in instead of looking like an abrupt transition. Everything from the lower middle tones down to black doesn't change at all.





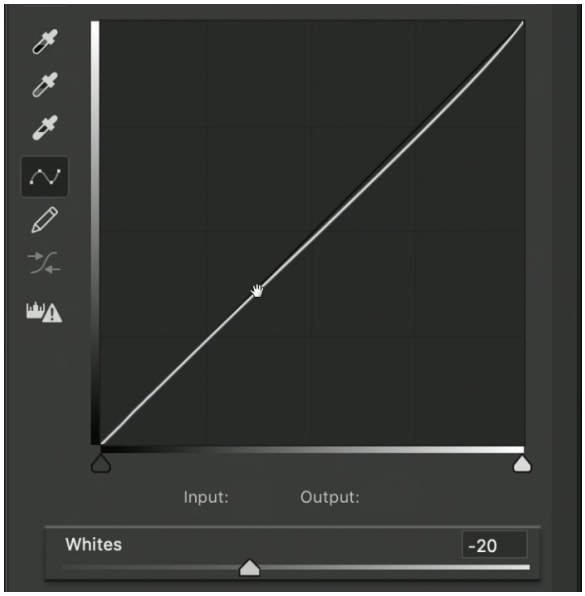


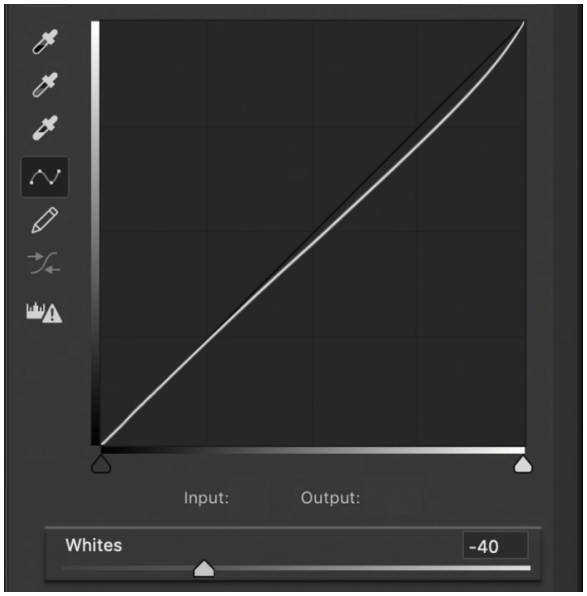


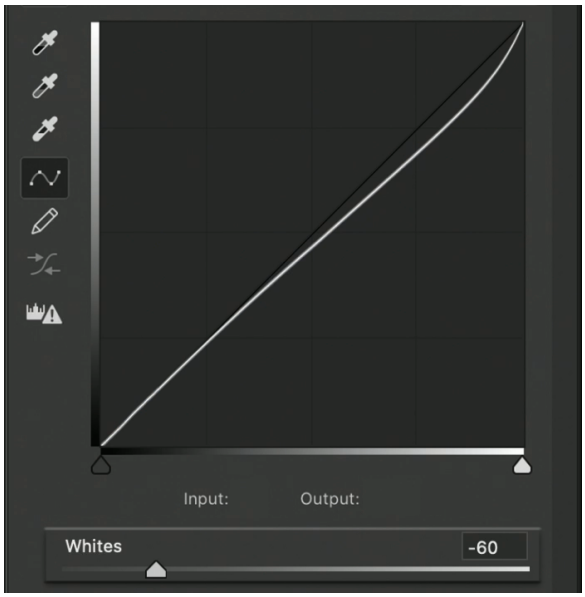
Negative Whites (09:59)

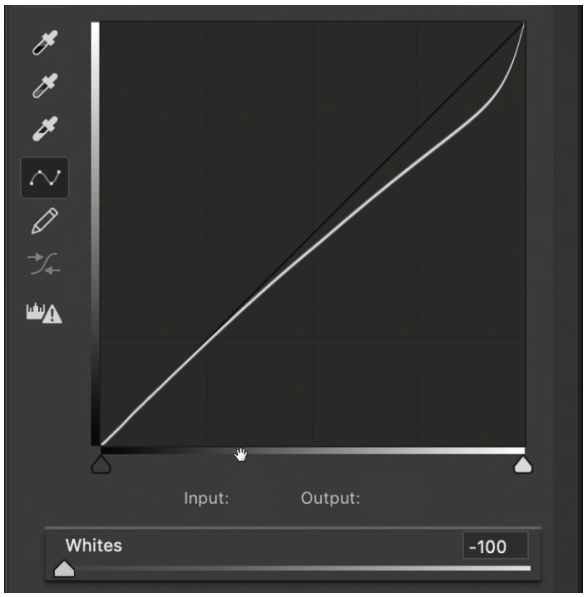
When you lower Whites, the top right corner of the curve stays put, so anything that's already solid white stays white. Everything darker than white in the bright part of the image is pulled down (darkened), and the effect tapers off as it moves into darker shades. The dark half of the image isn't touched.

Keep in mind that not every image contains white. If yours doesn't, its brightest shades sit further down the curve, where the change is largest.









Positive Highlights (13:03)

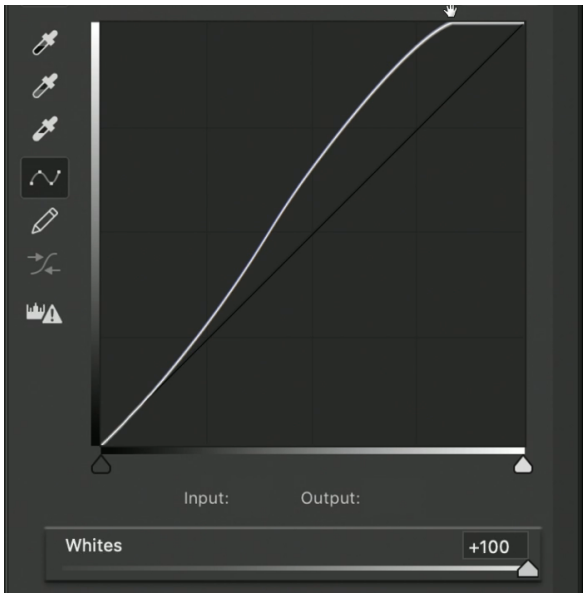
Highlights sounds like Whites, and both work on the bright part of the image, but they're different. When you raise Highlights, the shades close to black don't change, and the slider tries to keep most of the image from hitting solid white. The biggest change happens in the areas a little darker than white. I think of Whites as the brightest part of the picture and Highlights as the areas a bit darker than that.

Compare the two at 100. Whites mainly cares about what becomes solid white and affects more of the image as it works its way back to the original line. Highlights concentrates on the bright areas and is close to the original line by the time it reaches the middle tones.







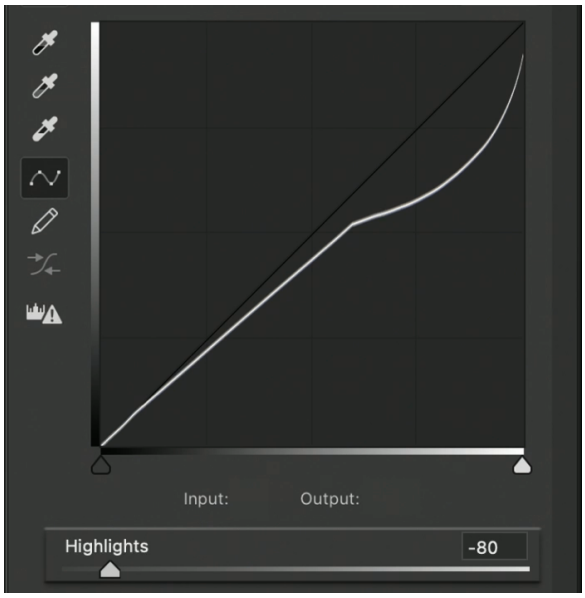


Negative Highlights (16:53)

Lowering Highlights makes white itself darker: what used to be white becomes a light gray. That's why people reach for it when the brightest part of a picture looks too bright. The biggest change is from the upper middle tones all the way to white, the rest of the curve blends that change into the image, and the darkest part of the image doesn't change.







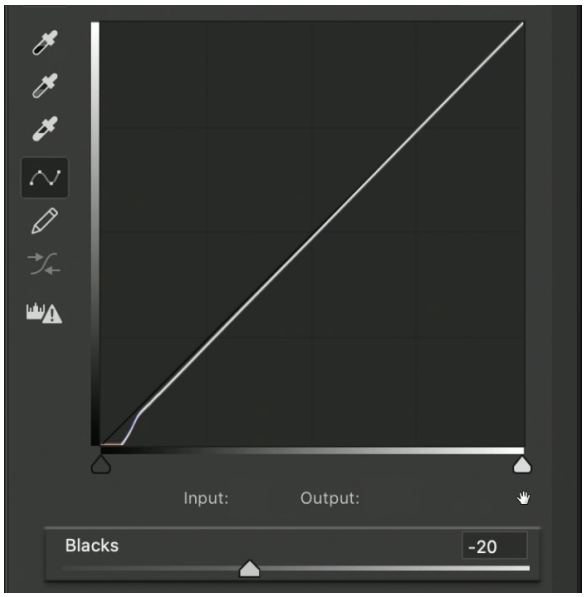


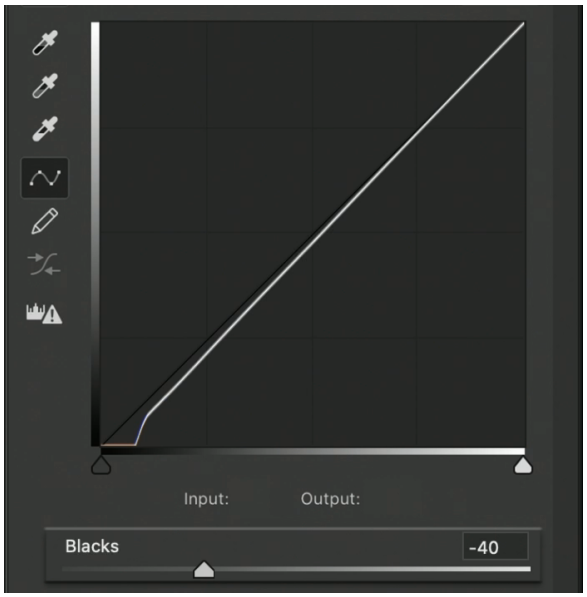
Negative Blacks (18:45)

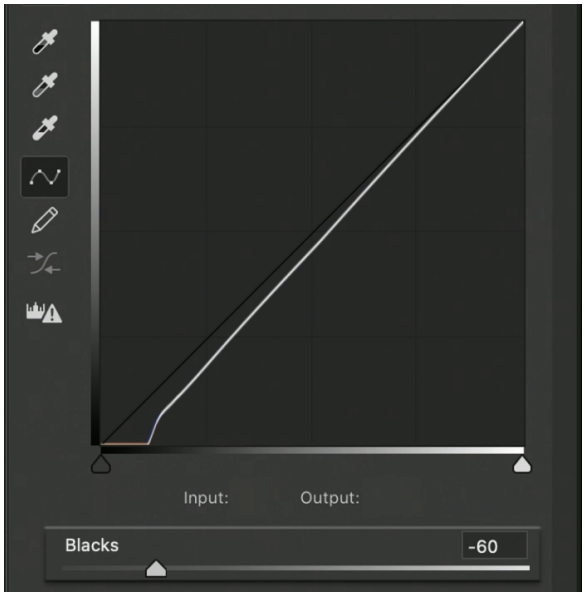
Blacks is most often moved to a negative setting. Just as Whites flattens the top of the curve, lowering Blacks flattens the bottom: shades that were close to black become solid black, then the curve quickly returns to normal. The lower you go, the more of the image becomes solid black, and the wider the range it needs to blend back in.

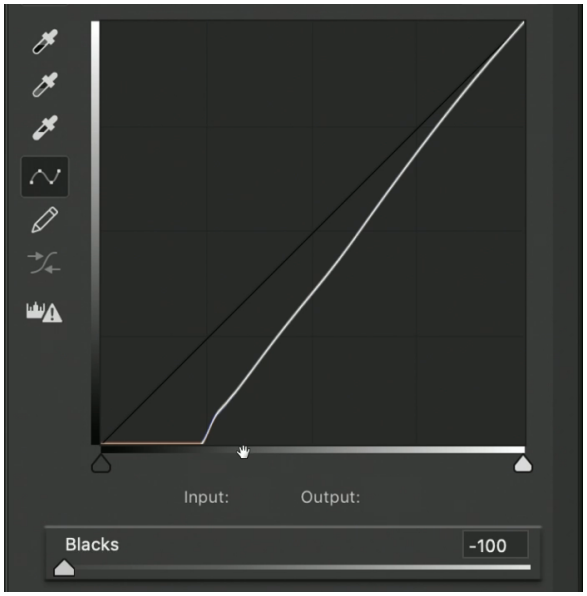
Hold **Option** (**Alt** in Windows) while dragging Blacks to see where the image becomes solid black. The same works with Whites to see where it becomes solid white.

This is useful when a hazy or foggy scene has nothing close to black, since lowering Blacks breaks through the haze. It can also turn a person who is already close to black into a solid black silhouette.



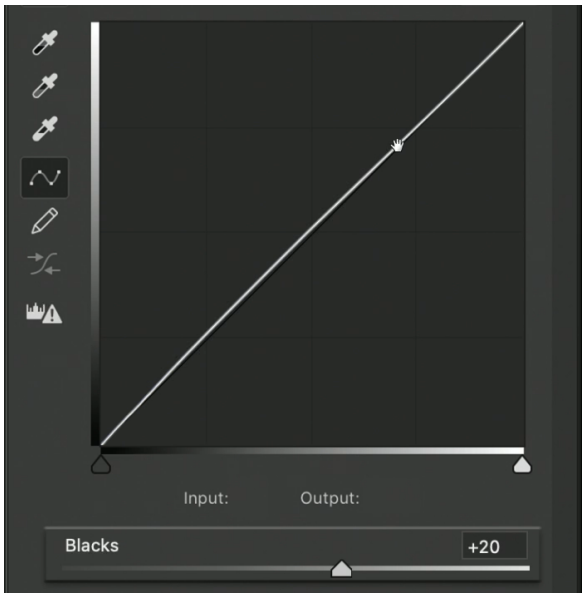


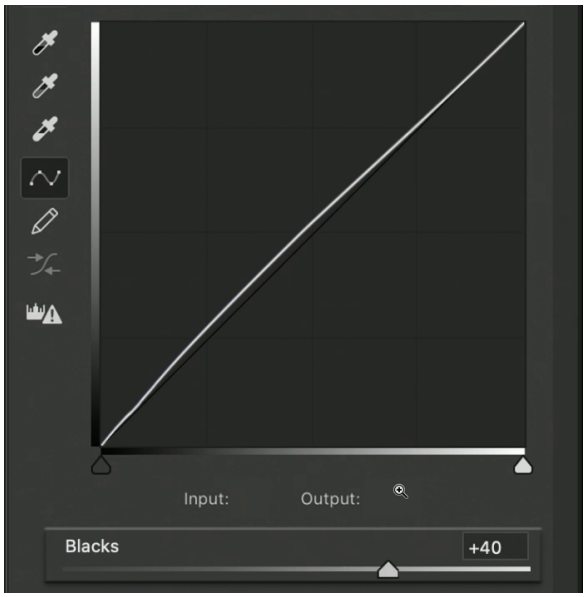


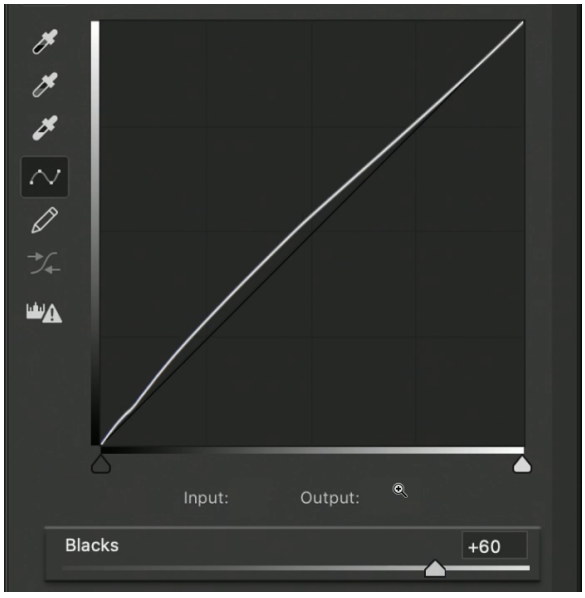


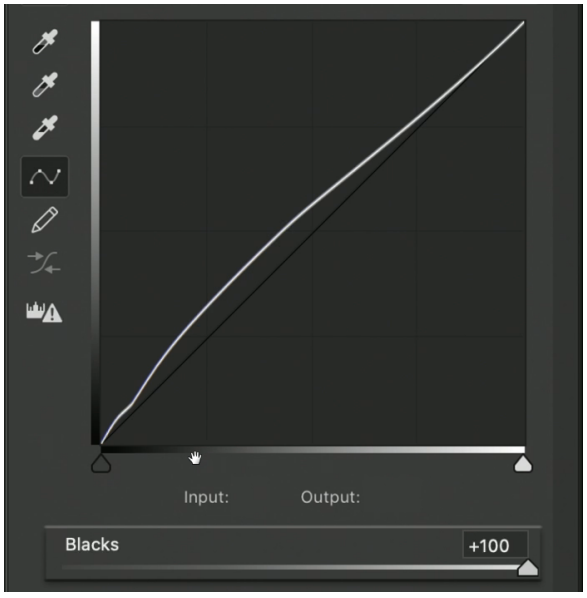
Positive Blacks (22:00)

Raising Blacks brightens the darkish shades, and that change reaches fairly far into the image, while the areas near white don't change at all. It changes the darkest shades much less so they don't look artificial: anything that's black stays black, and the darkish areas stay dark.







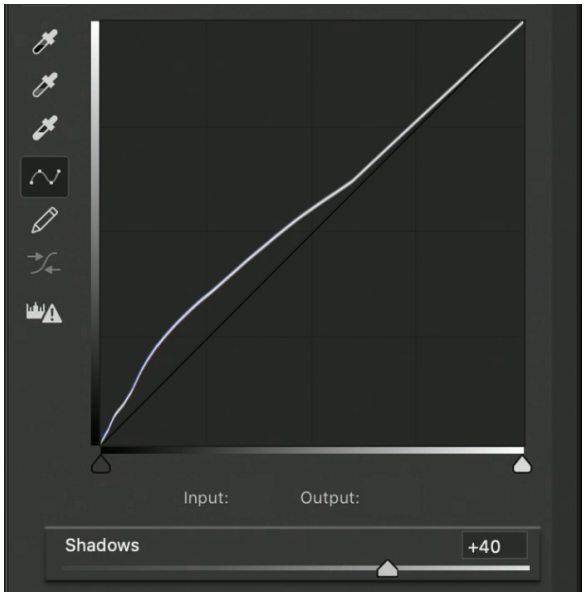


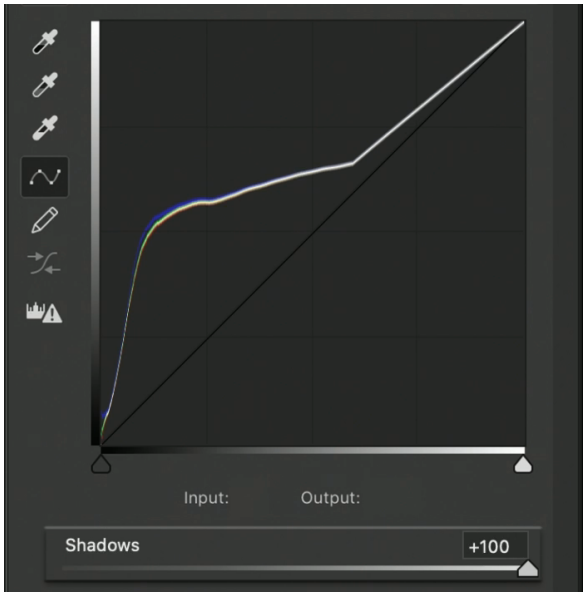
Shadows (23:17)

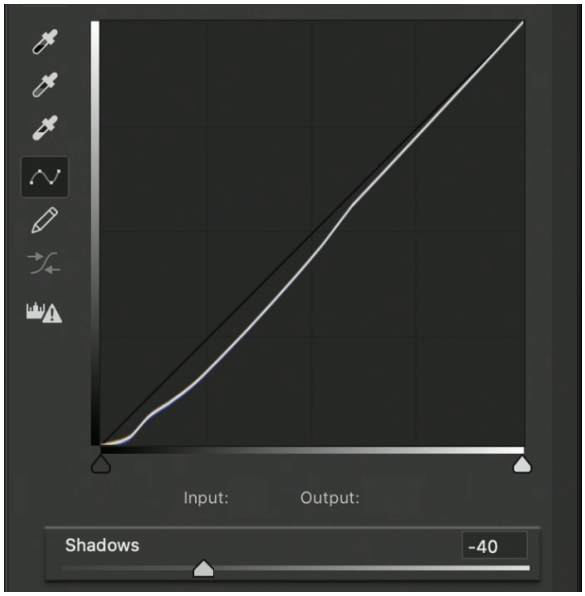
Shadows and Blacks both mainly affect the dark part of your picture, but they take different approaches. When you raise Shadows, the brightest shades don't change and the upper middle tones change only enough to blend in. Anything that's black stays black, but the curve quickly rises above the original line, with the biggest brightening in the dark shades just above black. That's the range people describe as the shadows.

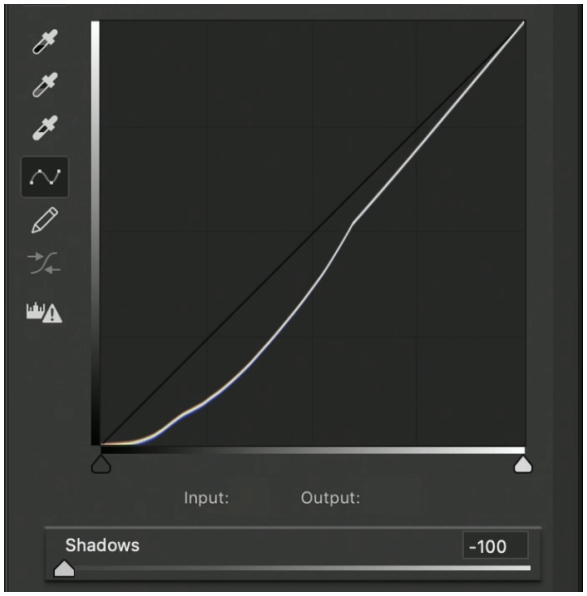
The curve is steeper than the original line from black up into the darker middle tones, so detail in the shadows becomes much easier to see. Just above that it's a little flatter, so detail there is slightly harder to see.

Lowering Shadows darkens that same dark range. The bright part of the image barely changes in contrast, and at extreme settings some areas become solid black.





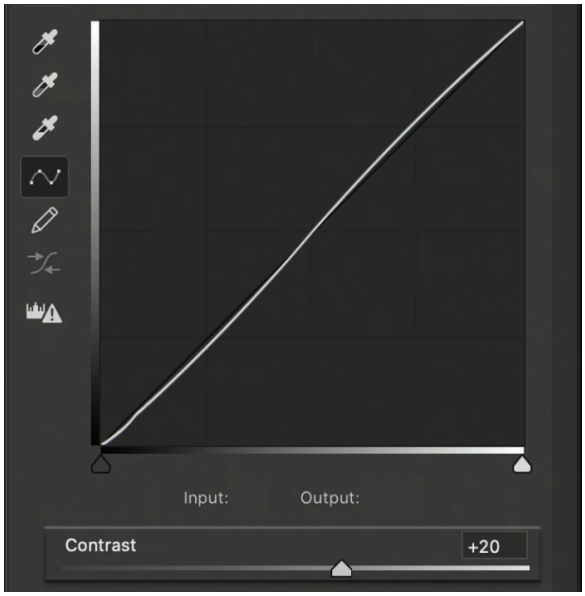


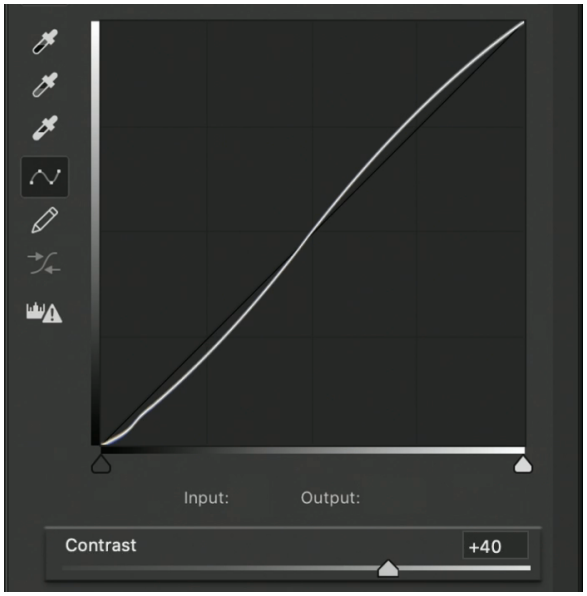


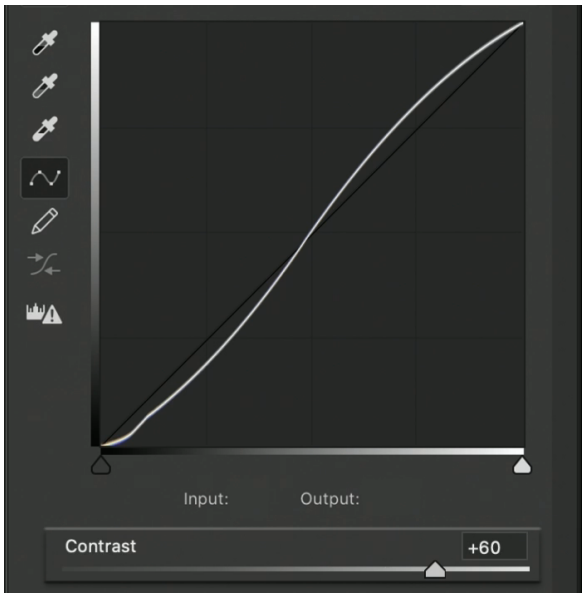
Contrast (28:14)

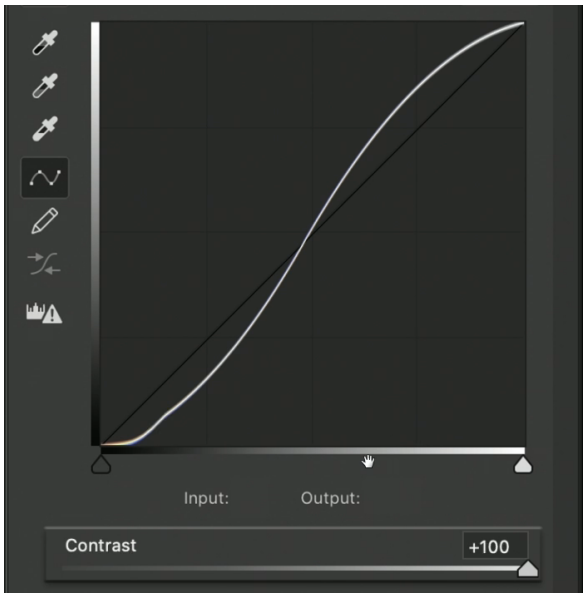
When you raise Contrast, three points stay close to where they started: black stays black, white stays white, and 50% brightness stays about the same. Shades darker than 50% get darker and shades brighter than 50% get brighter, so there's a greater difference between the two.

The curve gets steeper in the middle tones, which makes detail there easier to see. It gets flatter in the shadows and highlights, so detail there is harder to see; with a big increase, a large area of the shadows is forced to black (if the image has shades that dark).



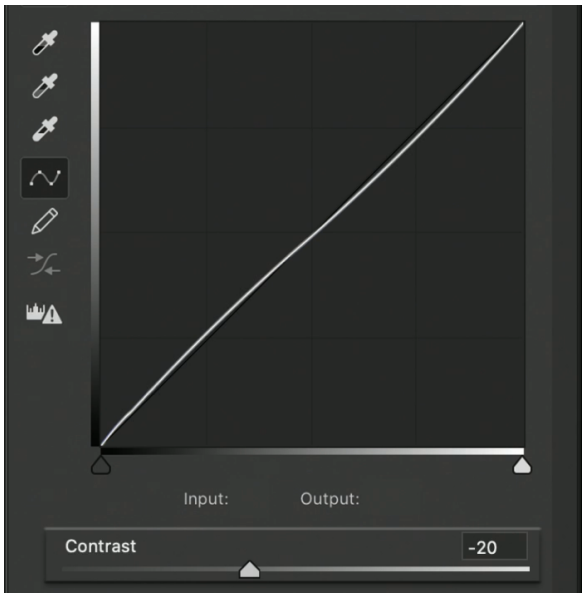


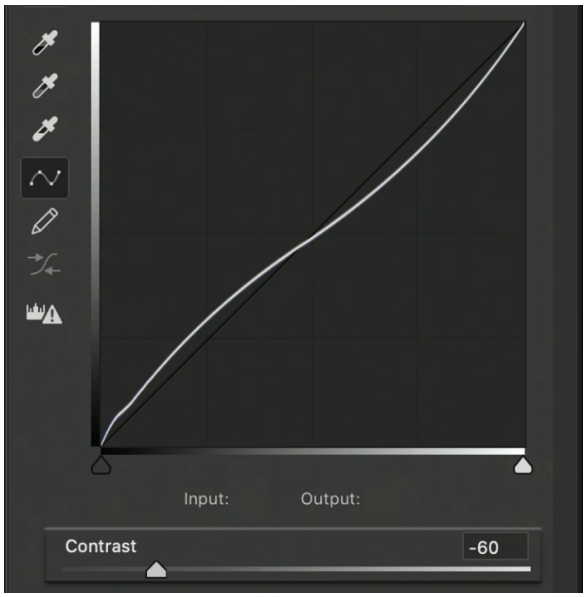


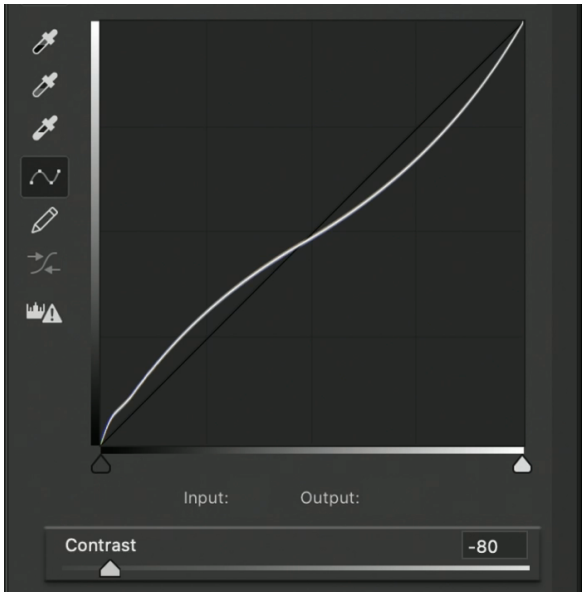


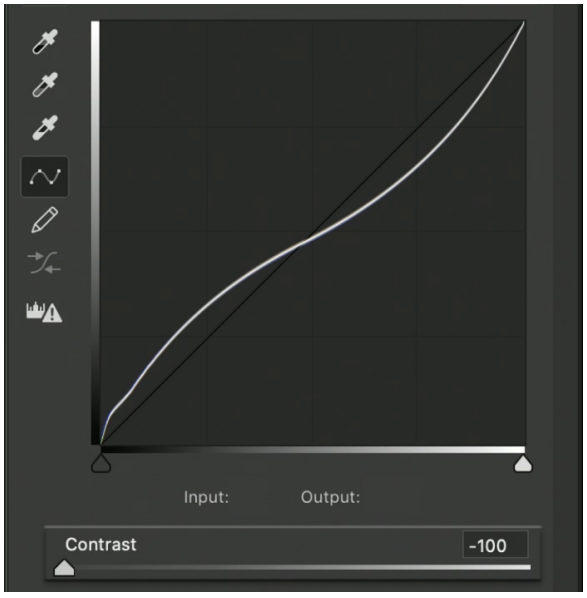
Negative Contrast (30:42)

Lowering Contrast does the opposite: bright things get darker and dark things get brighter. The middle tones get flatter, so their detail is harder to see, while the shadows and highlights get steeper. You see more detail in the shadows and highlights at the expense of the middle tones.









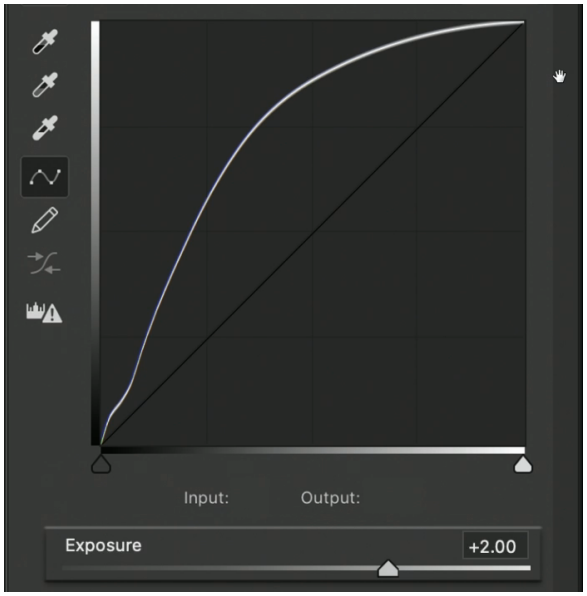
Exposure (33:08)

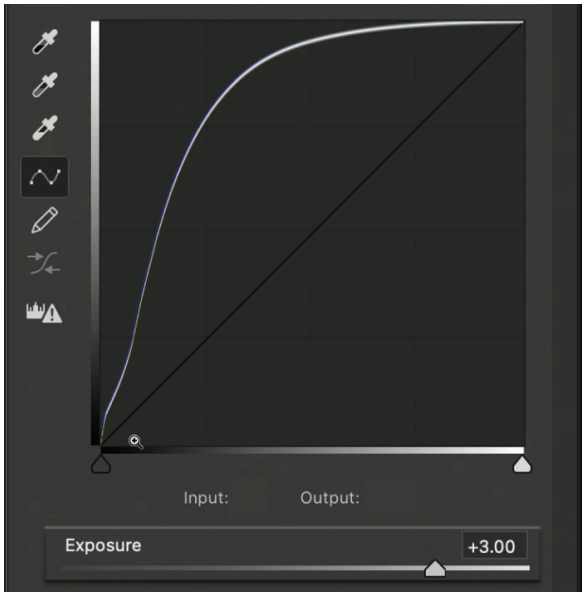
Exposure makes the biggest difference to your image, yet it's the slider I adjust the least. If I got the exposure right in the camera, I usually don't need to move it at all; I'd guess that's true of about 70% of my images.

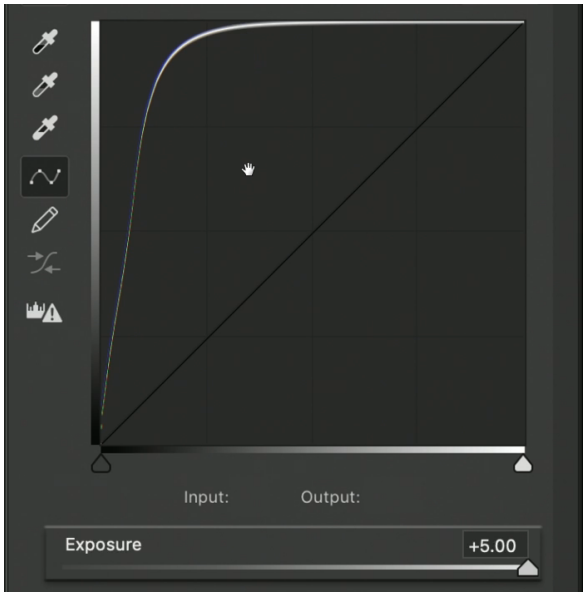
The other sliders run from 0 in the middle to 100 in either direction. Exposure is measured in stops, from −5 to +5, just like exposure compensation on your camera. A setting of +1 makes the image about twice as bright, which is already a big adjustment, and I rarely go beyond 1.5.

A positive setting brightens almost the entire image. At +5, anything brighter than the dark shades turns solid white, and the darkest shades become extremely steep, so you suddenly see what's in them. Exposure protects black for as long as it can: it changes the darkest shades much less than the rest, so black stays black until the setting is extreme.



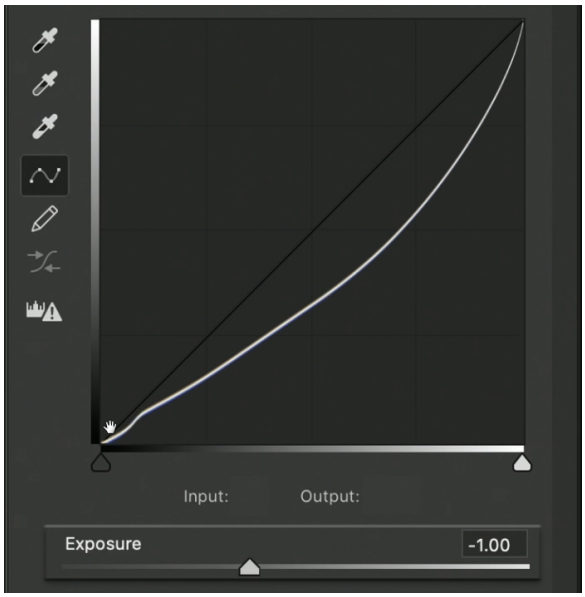


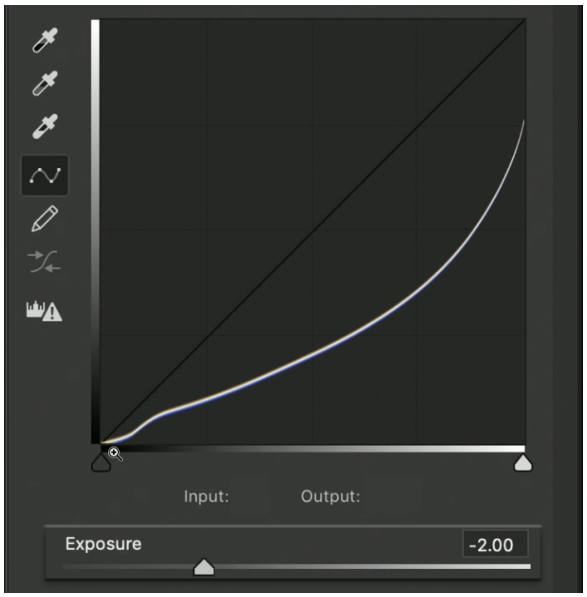


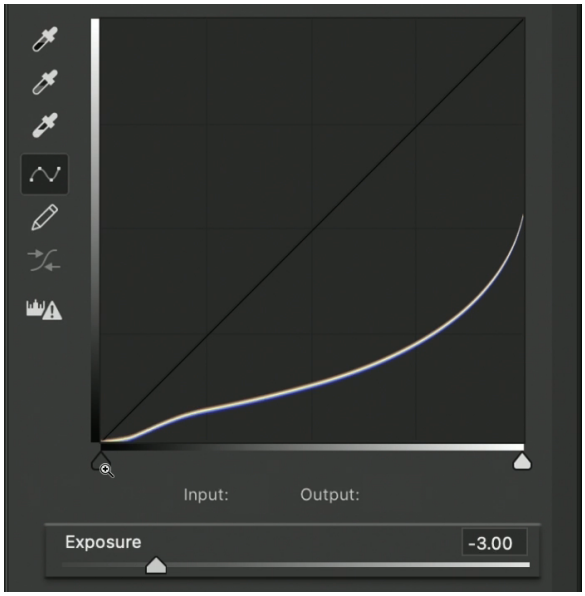


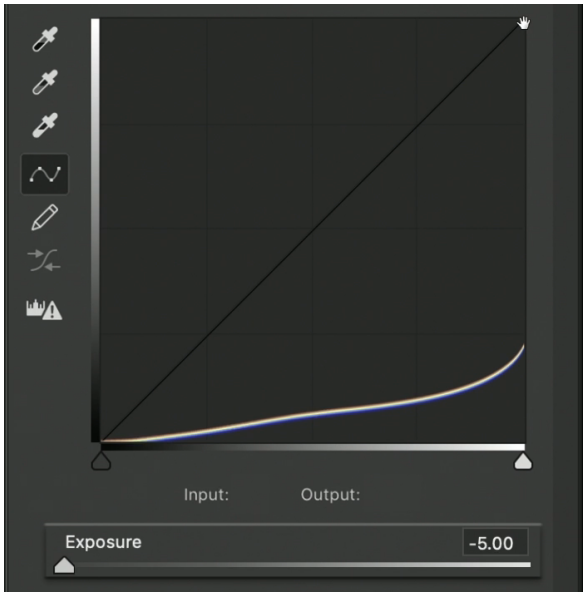
Negative Exposure (36:41)

A negative setting darkens almost the entire image, and white is no longer white. Exposure first tries to keep the shadows from hitting the bottom, so you can still see what's in them, but at about −3 it lets them go to black.



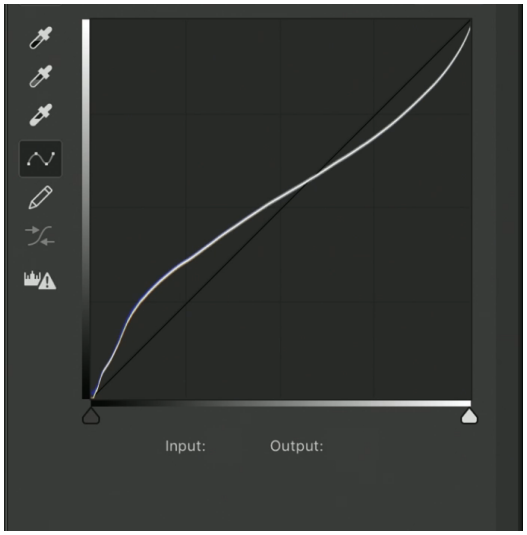






Combining Sliders (38:06)

You rarely move just one slider. This curve comes from a typical adjustment where about five sliders were moved. It looks like lowered Contrast, because bright areas got darker and dark areas got brighter, but that's not what was done. I believe Highlights was lowered (pulling the top of the curve down), Shadows was raised (lifting the bottom part), and Blacks and possibly Whites were adjusted.



So you can get the look of one slider, such as Contrast, by using others, such as Highlights and Shadows.

Limits of the Simulation (39:12)

The Curves equivalents aren't exact, for three reasons:

1. **It's Not a Raw File:** Raw files can hold detail in areas that look brighter than white or as dark as black. You reveal it by lowering Highlights or Whites, or by raising Shadows or Blacks, and a gradient can't show that extra detail.
2. **Not Every Image Has the Full Range:** Many images start out nowhere near black or white. In that case, ignore what the curve does to brightness levels your picture doesn't contain.
3. **Highlights and Shadows Do More Than Curves:** They don't just brighten and darken. They analyze what surrounds the area being adjusted and treat it differently depending on whether its surroundings are darker or brighter, which can add small halos around edges. Curves can't do that, so for these two sliders the curve shows the gist rather than the precise result.

Even so, analyzing the sliders this way should give you a deeper understanding of how similar-sounding sliders differ, such as Whites and Highlights or Blacks and Shadows, and a different way of thinking about them.

To see how a document like the one used in this lesson is built, watch Curves Comparison Concept.