Photoshop provides a variety of effects, such as shadows, glows, and bevels, that change the appearance of a layer’s contents in a non-destructive way – they affect how the content in a layer is displayed, while leaving the pixels unchanged. Layer effects are linked to the layer contents. If the contents of the layer are subsequently edited, the effects are applied to the modified contents. For example, if a drop shadow is applied to a text layer and then new text is added, the shadow is applied automatically to the new text.

A Layer Style is one or more Effect applied to a Layer or Layer Group. There are preset styles provided with Photoshop or a custom style can be applied using the Layer Style dialog box. Multiple effects can be applied in a single Layer Style and, in some cases, more than one instance of an effect can be applied.

Layers with effects applied will display the Layer Effects Icon $\mathbf{fx}$ to the right of the layer’s name in the Layers panel, and the applied effects are listed under the layer’s name. Clicking the arrow next to the $\mathbf{fx}$ icon will expand or collapse (toggle) the list of effects. Double clicking on Effects will open the Layer Style dialog, where the Layer Style can be edited by adding new Effects, changing existing Effects, or removing Effects. Double clicking on a single Effect Name opens the editing dialog for that specific effect.
Apply Preset Styles
Preset Styles can be applied from the Styles panel, which can be opened from the Menu Bar at the top of the Photoshop application. Choose \textit{Window} > \textit{Styles}. The layer styles that come with Photoshop are grouped into libraries by function. For example, one library contains styles for creating web buttons; another library contains styles for adding effects to text, and so on.

Normally, applying a Preset Style replaces the current layer style. To add the attributes of a second style to those of the current style, do one of the following:

- Click a style in the Styles panel to apply it to the currently selected layers.
- Drag a style from the Styles panel onto a layer in the Layers panel.
- Drag a style from the Styles panel to the document window, and release the mouse button when the pointer is over the layer content to which you want to apply the style. \textit{Note:} Hold down Shift as you click or drag to add (rather than replace) the style to any existing effects on the destination layer.
- Choose \textit{Layer} > \textit{Layer Style} > Blending Options, and click the word \textit{Styles} in the Layer Style dialog box (top item in the list on the left side of the dialog box). Click the style you want to apply, and click \textit{OK}.
- When using a Shape tool or Pen tool in shape layers mode, select a style from the pop-up panel in the options bar before drawing the shape.

\textit{Note:} Some effects have a + icon, indicating that they can be applied more than once in a layer style.

To apply a style from another layer, do one of the following:

- In the Layers panel, \textit{Alt-drag} (Windows) or \textit{Option-drag} (Mac OS) the style from a layer's effect list to copy it to another layer.
- In the Layers panel, \textit{click-drag} the style from a layer's effect list to move it to another layer.
Change how preset styles are displayed
Click the triangle in the Styles panel, Layer Style dialog box, or Layer Style pop-up panel in the options bar and choose a display option from the panel menu:

- **Text Only** to view the layer styles as a list.
- **Small Thumbnail** or **Large Thumbnail** to view the layer styles as thumbnails.
- **Small List** or **Large List** to view the layer styles as a list, with a thumbnail of the selected layer style displayed.

Layer Style dialog box overview
Layer styles are created and/or applied to a layer using the Layer Style dialog box.

![Layer Style dialog box](image)

The Layer Style dialog box
Click a check box to apply that effect using the current settings (without displaying the effect's options). Click an effect name to display its options.

Custom styles can be created using one or more of the following effects:

- **Drop Shadow**: Adds a shadow that falls behind the contents on the layer, giving a raised appearance.
- **Inner Shadow**: Adds a shadow that falls just inside the edges of the layer's content, giving a recessed appearance.
- **Outer Glow and Inner Glow**: Add glows that emanate from the outside or inside edges of the layer's content.
- **Bevel and Emboss**: Add various combinations of highlights and shadows to items on a layer.
- **Satin**: Applies interior shading that creates a satiny finish.
- **Color, Gradient, and Pattern Overlay**: Fills the layer's content with a color, gradient, or pattern.
• **Stroke:** Outlines the object on the current layer using color, a gradient, or a pattern. It is particularly useful on hard-edged shapes such as type.

### Apply or edit a custom layer style

*Note: You cannot apply layer styles to the Background layer, a locked layer, or a group.*

Select a single layer from the Layers panel and do one of the following:

- **Double-click** the layer, outside the layer name or thumbnail.
- Click the **Add A Layer Style** icon at the bottom of the Layers panel and choose an effect from the list.
- Choose an effect from the **Layer > Layer Style** submenu.
- To edit an existing style, **double-click** an effect displayed below the layer name in the **Layers panel.** (Click the triangle next to the **Add A Layer Style** icon to display the effects contained in the style.)
  - Set effect options in the **Layer Style** dialog box.
  - Add other effects to the style, if desired. In the **Layer Style** dialog box, click the check box to the left of the effect name to add the effect without selecting it.

*Note: You can edit multiple effects without closing the Layer Style dialog box. Click the name of an effect on the left side of the dialog box to display its options.*

### Set custom values for style defaults

In the **Layer Style** dialog box, customize the settings as desired, then click **Make Default.** When you next open the dialog box, your custom defaults are automatically applied. If you adjust settings and want to return to your custom defaults, click **Reset To Default.**

### Layer Style Options

The Layer Styles dialog provides options that allow the Effects to be customized by changing the values associated with the following option categories:

**Altitude**
For the **Bevel and Emboss** effect, sets the height of the light source. A setting of 0 is equivalent to ground level, 90 is directly above the layer.

**Angle**
Determines the lighting angle at which the effect is applied to the layer. Drag in the document window to adjust the angle of a **Pattern Overlay, Drop Shadow, Inner Shadow,** or **Satin** effect.
Anti-alias
Blends the edge pixels of a contour or gloss contour. This option is most useful on small shadows with complicated contours.

Blend Mode
Determines how the layer style blends with the underlying layers, which may or may not include the active layer. For example, an Inner Shadow blends with the active layer because the effect is drawn on top of that layer, but a Drop Shadow blends only with the layers beneath the active layer. In most cases, the default mode for each effect produces the best results.

Choke
Shrinks the boundaries of the matte of an Inner Shadow or Inner Glow prior to blurring.

Color
Specifies the color of a shadow, glow, or highlight. Click the color box and choose a color.

Contour
With solid-color glows, Contour can be used to create rings of transparency. With gradient-filled glows, Contour can be used to create variations in the repetition of the gradient color and opacity. In beveling and embossing, Contour can be used to sculpt the ridges, valleys, and bumps that are shaded in the embossing process. With shadows, Contour can be used to specify the fade.

Distance
Specifies the offset distance for a shadow or satin effect. Drag in the document window to adjust the offset distance.

Depth
Specifies the depth of a bevel. It also specifies the depth of a pattern.

Use Global Light
This setting can be used to set one "master" lighting angle that is then available in all the layer effects that use shading: Drop Shadow, Inner Shadow, and Bevel and Emboss. In any of these effects, if Use Global Light is selected, and a lighting angle is set, that angle becomes the global lighting angle. Any other effect that has Use Global Light selected automatically inherits the same angle setting. If Use Global Light is deselected, the lighting angle setting is "local" and applies only to that effect. The global lighting angle can also be set by choosing Layer Style > Global Light.

Gloss Contour
Creates a glossy, metallic appearance. Gloss Contour is applied after shading a bevel or emboss.

Gradient
Specifies the gradient of a layer effect. Click the gradient to display the Gradient Editor, or click the inverted arrow and choose a gradient from the pop-up panel. It is possible to edit an existing gradient or create a new gradient using the Gradient Editor. You can edit the color or opacity in the Gradient Overlay panel the same way you edit them in the Gradient Editor. For some effects, you can specify additional gradient options. Reverse flips the orientation of the
gradient, *Align With Layer* uses the bounding box of the layer to calculate the gradient fill, and *Scale* adjusts the size of the applied gradient. The center of the gradient can be moved by clicking and dragging in the image window. *Style* specifies the shape of the gradient.

**Highlight or Shadow Mode**

Specifies the blending mode of a bevel or emboss highlight or shadow.

**Jitter**

Varies the application of a gradient's color and opacity.

**Layer Knocks Out Drop Shadow**

Controls the drop shadow's visibility in a semitransparent layer.

**Noise**

Specifies the number of random elements in the opacity of a glow or shadow. Enter a value or drag the slider.

**Opacity**

Sets the opacity of the layer effect. Enter a value or drag the slider.

**Pattern**

Specifies the pattern of a layer effect. Click the pop-up panel and choose a pattern. Set the *Angle* selector at a certain degree or manually type in an angle value to rotate your pattern at the desired angle. Click the *New Preset* button to create a new preset pattern based on the current settings. Click *Snap To Origin* to make the origin of the pattern the same as the origin of the document (when *Link With Layer* is selected), or to place the origin at the upper-left corner of the layer (if *Link With Layer* is deselected). Select *Link With Layer* if you want the pattern to move along with the layer as the layer moves. Drag the Scale slider or enter a value to specify the size of the pattern. Drag a pattern to position it in the layer; reset the position by using the *Snap To Origin* button. The *Pattern* option is not available if no patterns are loaded.

**Position**

Specifies the position of a stroke effect as *Outside*, *Inside*, or *Center*.

**Range**

Controls which portion or range of the glow is targeted for the contour.

**Size**

Specifies the radius and size of blur or the size of the shadow.

**Soften**

Blurs the results of shading to reduce unwanted artifacts.

**Source**

Specifies the source for an *Inner Glow*. Choose *Center* to apply a glow that emanates from the center of the layer's content, or *Edge* to apply a glow that emanates from the inside edges of the layer's content.

**Spread**

Expands the boundaries of the matte prior to blurring.
Style
Specifies the style of a bevel: Inner Bevel creates a bevel on the inside edges of the layer contents; Outer Bevel creates a bevel on the outside edges of the layer contents; Emboss simulates the effect of embossing the layer contents against the underlying layers; Pillow Emboss simulates the effect of stamping the edges of the layer contents into the underlying layers; and Stroke Emboss confines embossing to the boundaries of a stroke effect applied to the layer. (The Stroke Emboss effect is not visible if no stroke is applied to the layer.)

Technique
Smooth, Chisel Hard, and Chisel Soft are available for bevel and emboss effects; Softer and Precise apply to Inner Glow and Outer Glow effects.

Smooth
Blurs the edges of a matte slightly and is useful for all types of mattes, whether their edges are soft or hard. It does not preserve detailed features at larger sizes.

Chisel Hard
Uses a distance measurement technique and is primarily useful on hard-edged mattes from anti-aliased shapes such as type. It preserves detailed features better than the Smooth technique.

Chisel Soft
Uses a modified distance measurement technique and, although not as accurate as Chisel Hard, is more useful on a larger range of mattes. It preserves features better than the Smooth technique.

Softer
Applies a blur and is useful on all types of mattes, whether their edges are soft or hard. At larger sizes, Softer does not preserve detailed features.

Precise
Uses a distance measurement technique to create a glow and is primarily useful on hard-edged mattes from anti-aliased shapes such as type. Precise preserves detail features better than the Softer technique.

Texture
Applies a texture. Use Scale to adjust the size of the size of the texture. Select Link With Layer if you want the texture to move along with the layer as the layer moves. Invert inverts the texture. Depth varies the degree and direction (up/down) to which the texturing is applied. Snap To Origin makes the origin of the pattern the same as the origin of the document (if Link With Layer is deselected) or places the origin in the upper-left corner of the layer (if Link With Layer is selected). Drag the texture to position it in the layer.

Modify Layer Effects with Contours
When creating custom layer styles, Contours are used to control the shape of Drop Shadow, Inner Shadow, Inner Glow, Outer Glow, Bevel and Emboss, and Satin effects over a given range. For example, a Linear contour on a Drop Shadow causes the opacity to drop off in a
linear transition. Use a Custom contour to create a unique shadow transition. You can select,
reset, delete, or change the preview of contours in the Contour pop-up panel and Preset
Manager.

Create a custom contour

1. Select the Drop Shadow, Inner Shadow, Inner Glow, Outer Glow, Bevel and Emboss, 
   Contour, or Satin effect in the Layer Style dialog box.

2. Click the contour thumbnail in the Layer Style dialog box.

3. Click the contour to add points, and drag to adjust the contour. Or enter values for Input
   and Output.

4. To create a sharp corner instead of a smooth curve, select a point and click Corner.

5. To save the contour to a file, click Save and name the contour.

6. To store a contour as a preset, choose New.

7. Click OK. New contours are added at the bottom of the pop-up panel.

Load a contour
Click the contour in the Layer Style dialog box, and in the Contour Editor dialog box, and then
choose Load. Go to the folder containing the contour library you want to load and click Open.

Delete a contour
Click the inverted arrow next to the currently selected contour to view the pop-up panel. Press
Alt (Windows) or Option (Mac OS), and click the contour you want to delete.

Set a global lighting angle for all layers
Using global light gives the appearance of a common light source shining on the image. Do one
of the following:

- Choose Layer > Layer Style > Global Light. In the Global Light dialog box, enter a value or
drag the angle radius to set the angle and altitude, and click OK.
• In the Layer Style dialog box for Drop Shadow, Inner Shadow, or Bevel, select **Use Global Light**. For **Angle**, enter a value or drag the radius, and click **OK**.

The angle setting will be applied to each layer effect that uses the global lighting angle.

**Display or Hide Layer Styles**

When a layer has a style, the "fx" icon appears to the right of the layer's name in the Layers panel.

**To hide or show all layer styles in an image:**
Choose **Layer > Layer Style > Hide All Effects** or **Show All Effects**.

**To expand or collapse layer styles in the Layers panel, do one of the following:**

• Click the triangle next to the **Add A Layer Style** icon to expand the list of layer effects applied to that layer. Click the triangle again to collapse the layer effects.

• To expand or collapse all of the layer styles applied within a group, hold down **Alt** (Windows) or **Option** (Mac OS), and click the triangle or inverted triangle for the group. The layer styles applied to all layers within the group expand or collapse correspondingly.

**Copy Layer Styles**

Copying and pasting styles is an easy way to apply the same effects to multiple layers.

**To copy layer styles between layers:**
1. From the Layers panel, select the layer containing the style you want to copy.
2. Choose **Layer > Layer Style > Copy Layer Style**.
3. Select the destination layer from the panel, and choose **Layer > Layer Style > Paste Layer Style**.

The pasted layer style replaces the existing layer style on the destination layer or layers.

**To copy layer styles between layers by dragging, do one of the following:**
1. In the Layers panel, **Alt-drag** (Windows) or **Option-drag** (Mac OS) a single layer effect from one layer to another to duplicate the layer effect, or drag the Effects bar from one layer to another to duplicate the layer style.
2. Drag one or more layer effects from the Layers panel to the image to apply the resulting layer style to the highest layer in the Layers panel that contains pixels at the drop point.

**Scale a Layer Effect**
A layer style may have been fine-tuned for a target resolution and features of a given size. Using *Scale Effects* allows you to adjust the size of the effects in the layer style without scaling the object to which the layer style is applied.

1. Select the layer in the *Layers panel*.
2. Choose *Layer > Layer Style > Scale Effects*.
3. Enter a percentage or drag the slider.
4. Select *Preview* to preview the changes in the image.
5. Click *OK*.

**Remove Layer Effects**

You can remove an individual effect from a style applied to a layer, or remove the entire style from the layer.

**Remove an effect from a style**

1. In the *Layers panel*, expand the layer style to see its effects.
2. Drag the effect to the *Delete* icon.

**Remove a style from a layer**

In the *Layers panel*, select the layer containing the style you want to remove, then do one of the following:

1. In the *Layers panel*, drag the *Effects bar* to the *Delete* icon.
2. Choose *Layer > Layer Style > Clear Layer Style*.
3. Select the layer, and then click the *Clear Style* button at the bottom of the *Styles panel*.

**Convert a Layer Style to Image Layers**

To customize or fine-tune the appearance of layer styles, you can convert the layer styles to regular image layers. After you convert a layer style to image layers, you can enhance the result by painting or applying commands and filters. However, you can no longer edit the layer style on the original layer, and the layer style no longer updates as you change the original image layer.

*Note:* The layers produced by this process may not result in artwork that exactly matches the version using layer styles. You may see an alert when you create the new layers.

1. In the *Layers panel*, select the layer containing the layer style that you want to convert.
2. Choose *Layer > Layer Style > Create Layers*. 
You can now modify and restack the new layers in the same way as regular layers. Some effects—for example, Inner Glow—convert to layers within a clipping mask.

Create and Manage Preset Styles

You can create a custom style and save it as a preset, which is then available from the Styles panel. You can save preset styles in a library and load or remove them from the Styles panel as you need them.

Create a new preset style

From the Layers panel, select the layer containing the style that you want to save as a preset and do one of the following:

1. Click an empty area of the Styles panel and click the Create New Style button at the bottom of the Styles panel.
2. Choose New Style from the Styles panel menu.
3. Choose Layer > Layer Style > Blending Options, and click New Style in the Layer Style dialog box.

Enter a name for the new preset style, set the style options, and click OK.

Rename a preset style

Do one of the following:

1. Double-click a style in the Styles panel. If the Styles panel is set to display styles as thumbnails, enter a new name in the dialog box and click OK. Otherwise, type a new name directly in the Styles panel and press Enter (Windows) or Return (Mac OS).
2. Select a style in the Styles area of the Layer Style dialog box. Then choose Rename Style from the pop-up menu, enter a new name, and click OK.
3. When using a shape or Pen tool, select a style from the Layer Style pop-up panel in the options bar. Then choose Rename Style from the pop-up panel menu.

Delete a preset style

Do one of the following:

1. Drag a style to the Delete icon at the bottom of the Styles panel.
2. Press Alt (Windows) or Option (Mac OS), and click the layer style in the Styles panel.
3. Select a style in the Styles area of the Layer Style dialog box. (See Apply preset styles.) Then choose Delete Style from the pop-up menu.
4. When using a shape or Pen tool, select a style from the Layer Style pop-up panel in the options bar. Then choose Delete Style from the pop-up panel menu.
Save a set of preset styles as a library
Do one of the following:

1. Choose **Save Styles** from the *Styles panel* menu.

2. Select **Styles** on the left side of the *Layer Style* dialog box. Then choose **Save Styles** from the pop-up menu.

3. When using a shape or Pen tool, click the *Layer Style* thumbnail in the options bar. Then choose **Save Styles** from the pop-up panel menu.

4. Choose a location for the style library, enter a file name, and click **Save**.

You can save the library anywhere. However, if you place the library file in the *Presets/Styles* folder inside the default presets location, the library name will appear at the bottom of the *Styles panel* menu when you restart the application.

**Note:** You can also use the Preset Manager to rename, delete, and save libraries of preset styles.

Load a library of preset styles
Click the triangle in the *Styles panel, Layer Style* dialog box, or *Layer Style* pop-up panel in the options bar, then do one of the following:

1. Choose **Load Styles** to add a library to the current list. Then select the library file you want to use, and click **Load**.

2. Choose **Replace Styles** to replace the current list with a different library. Then select the library file you want to use, and click **Load**.

3. Choose a library file (displayed at the bottom of the panel menu). Then click **OK** to replace the current list, or click **Append** to append the current list.

4. To return to the default library of preset styles, choose **Reset Styles**. You can either replace the current list or append the default library to the current list.

**Note:** You can also use the Preset Manager to load and reset style libraries.