

# The tcolorbox beamer inner theme

## A beamer inner theme to replicate standard beamer blocks with tcolorboxes

samcarter

<https://github.com/samcarter/beamertheme-tcolorbox>

<https://ctan.org/pkg/beamertheme-tcolorbox>

Version v0.9 – 2025/02/01

## 1 Introduction

Over the last decade of answering beamer problems and more recently also being one of the maintainers of the beamer class, I saw countless of requests about beamer blocks. There were users who were looking for sometimes smaller, sometimes larger tweaks to the blocks in their document, for example "How to use the rectangular blocks with sharp corners, but with the shadows from the rounded beamer blocks". Other users encountered various tiny or something bigger problems with the default beamer blocks, like issues with some pdf viewers in which the seams of the underlying colorboxes would become visible.

For all these cases, there is now an alternative to the default beamer blocks: The tcolorbox inner beamer theme will replace the usual beamer mechanism to draw blocks with tcolorboxes. The tcolorboxes will automatically adopt the look and feel (round vs. sharp corners and shadows) as well as the colours of the normal beamer blocks.

This package is work in progress, therefore I would be happy to hear your feedback and ideas how to improve the package. The development version of the source code can be found at <https://github.com/samcarter/beamertheme-tcolorbox>, including an issue tracker. A more stable version of the package can be found on CTAN (<https://ctan.org/pkg/beamertheme-tcolorbox>) and is included in both T<sub>E</sub>XLive and M<sub>I</sub>K<sub>T</sub>E<sub>X</sub> as beamertheme-tcolorbox. If you seek any other assistance (not bug reports/feature requests), I suggest asking at <https://topanswers.xyz/tex>.

Copyright © samcarter. Permission is granted to copy, distribute and/or modify this software under the terms of the LaTeX project public licence, version 1.3c or later <https://www.latex-project.org/lppl.txt>.

## 2 Usage

The basic usage is fairly simple. One just needs to load the theme via

Usage

```
\useinnertheme{tcolorbox}
```

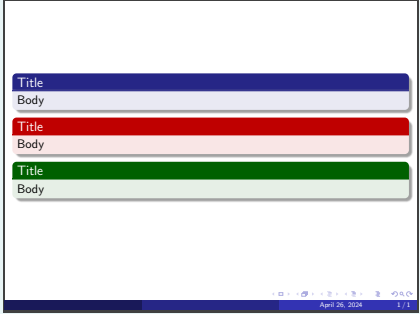
and after that, one can use the normal beamer block environment as usual.

Behind the scenes, this will replace the default mechanism of puzzling together the block from two separate beamer colorboxes, with one tcolorbox.

In this simple configuration, the look and feel of the new blocks will be taken from other themes loaded in the presentation. For example if the Madrid theme is loaded, the resulting tcolorbox will have the usual colours, rounded corners and a shadow:

**Example**

```
\documentclass{beamer}
\usetheme{Madrid}
\useinnertheme{tcolorbox}
\begin{document}
\begin{frame}
  \begin{block}{Title}
    Body
  \end{block}
  \begin{alertblock}{Title}
    Body
  \end{alertblock}
  \begin{exampleblock}{Title}
    Body
  \end{exampleblock}
\end{frame}
\end{document}
```



Additional settings done by user, like e.g. `\setbeamertemplate{blocks}[rounded]`, won't be taken into account and the tcolorbox inner theme should be loaded after such modifications.

### 3 Options

In addition to automatically adopting settings from other themes, one can also explicitly influence the look and feel via these options:

**blocks** controls if tcolorboxes should be used for beamer blocks (default: true)

**inmargin** controls if the block titles are placed in the left sidebar instead of the top of the block, e.g. for themes like Bergen (default: false, but set to true if the inmargin inner theme is detected)

**rounded** controls if corners are rounded or sharp (default: false, but set to true if the rounded inner theme is detected)

**shaded** controls if there is a short colour gradient between the title and the body (default: false, but set to true if the block corners are rounded)

**shadow** controls if the block has a shadow (default: false, but set to true if the shadow outer theme is detected)

**showtitle** controls if a small coloured stripe is shown for blocks with empty title (default: true, but set to false if the block has rounded corners)

**titlepage** controls if tcolorboxes should be used for the title page, section page etc. (default: true)

These options can be set to true or false (calling either option without explicit true or false will set it to true).

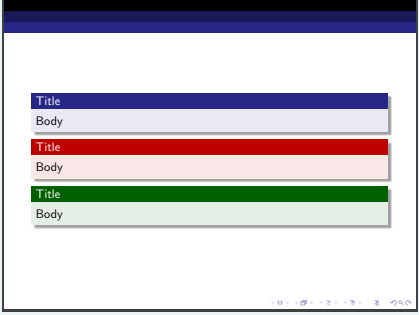
If one, for example, likes the Antibes theme, but prefers the blocks to have shadows, they can now easily be added:

**Example**

```

\documentclass{beamer}
\usetheme{Antibes}
\useinnertheme[
  shadow
]{tcolorbox}
\begin{document}
\begin{frame}
  \begin{block}{Title}
    Body
  \end{block}
  \begin{alertblock}{Title}
    Body
  \end{alertblock}
  \begin{exampleblock}{Title}
    Body
  \end{exampleblock}
\end{frame}
\end{document}

```




Beyond these two options, the users also has the myriads of options of the tcolobox package to their disposal, e.g. via `\tcbset{...}` or `\tcbsetforeverylayer{...}`:

**Example**

```

\documentclass{beamer}
\usetheme{Ilmenau}
\useinnertheme{tcolorbox}
\tcbsetforeverylayer{
  borderline={1pt}{0pt}{black,dashed}
}
\begin{document}
\begin{frame}
  \begin{block}{Title}
    Body
  \end{block}
  \begin{alertblock}{Title}
    Body
  \end{alertblock}
  \begin{exampleblock}{Title}
    Body
  \end{exampleblock}
\end{frame}
\end{document}

```



## 4 Using with `\pause`

Using the `\pause` macro in pgf-based environments like a `tikzpicture` or a `tcolorbox` is known to cause problems like disappearing footlines. There are some ways to avoid such problems:

1. The best solution to problems with `\pause` is to not use `\pause`. Instead one can use overlays like `\only<...>{...}`, `\visible<...>{...}`, `\uncover<...>{...}` etc.
2. Alternatively, one could switch to another covered style for the presentation, e.g. by adding `\setbeamercovered{transparent=0}` to the preamble.