

# Package ‘ggdark’

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**Type** Package

**Title** Dark Mode for 'ggplot2' Themes

**Version** 0.2.1

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**Description** Activate dark mode on your favorite 'ggplot2' theme with `dark_mode()` or use the dark versions of 'ggplot2' themes, including `dark_theme_gray()`, `dark_theme_minimal()`, and others. When a dark theme is applied, all geom color and geom fill defaults are changed to make them visible against a dark background. To restore the defaults to their original values, use `invert_geom_defaults()`.

**License** MIT + file LICENSE

**Depends** R (>= 3.1)

**Imports** ggplot2 (>= 3.0)

**Suggests** testthat

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|           |                                                |
|-----------|------------------------------------------------|
| dark_mode | <i>Activate dark mode on a 'ggplot2' theme</i> |
|-----------|------------------------------------------------|

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## Description

Activate dark mode on a 'ggplot2' theme

## Usage

```
dark_mode(.theme = theme_get(), verbose = TRUE,  
          force_geom_invert = FALSE)
```

## Arguments

|                   |                                                                                 |
|-------------------|---------------------------------------------------------------------------------|
| .theme            | ggplot2 theme object                                                            |
| verbose           | print messages (default: TRUE)                                                  |
| force_geom_invert | Force the inversion of geom defaults for fill and color/colour (default: FALSE) |

## Value

dark version of theme

## Examples

```
library(ggplot2)  
  
p1 <- ggplot(iris, aes(Sepal.Width, Sepal.Length, color = Species)) +  
  geom_point()  
  
p1 # theme returned by theme_get()  
p1 + dark_mode() # activate dark mode on theme returned by theme_get()  
  
p2 <- ggplot(iris, aes(Sepal.Width, Sepal.Length)) +  
  geom_point() +  
  facet_wrap(~ Species)  
  
p2 + dark_mode(theme_minimal()) # activate dark mode on another theme  
  
invert_geom_defaults() # restore geom defaults to their original values
```

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|        |                                          |
|--------|------------------------------------------|
| ggdark | <i>'ggdark': Dark mode for 'ggplot2'</i> |
|--------|------------------------------------------|

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### Description

Use `dark_mode()` on your favorite 'ggplot2' theme to activate its dark mode. 'ggdark' also provides dark versions of the themes included in 'ggplot2': `dark_theme_grey()`, `dark_theme_bw()`, `dark_theme_minimal()`, and others. When a dark theme is applied, all geom color and geom fill defaults are inverted to make them visible against a dark background. To change them back, use `invert_geom_defaults()`.

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|             |                             |
|-------------|-----------------------------|
| ggdarktheme | <i>Complete dark themes</i> |
|-------------|-----------------------------|

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### Description

These are dark versions of complete themes from 'ggplot2' which control all non-data display. Use `theme()` if you just need to tweak the display of an existing theme.

### Usage

```
dark_theme_bw(base_size = 11, base_family = "",
  base_line_size = base_size/22, base_rect_size = base_size/22)

dark_theme_classic(base_size = 11, base_family = "",
  base_line_size = base_size/22, base_rect_size = base_size/22)

dark_theme_gray(base_size = 11, base_family = "",
  base_line_size = base_size/22, base_rect_size = base_size/22)

dark_theme_grey(base_size = 11, base_family = "",
  base_line_size = base_size/22, base_rect_size = base_size/22)

dark_theme_minimal(base_size = 11, base_family = "",
  base_line_size = base_size/22, base_rect_size = base_size/22)

dark_theme_light(base_size = 11, base_family = "",
  base_line_size = base_size/22, base_rect_size = base_size/22)

dark_theme_dark(base_size = 11, base_family = "",
  base_line_size = base_size/22, base_rect_size = base_size/22)

dark_theme_void(base_size = 11, base_family = "",
  base_line_size = base_size/22, base_rect_size = base_size/22)
```

```
dark_theme_test(base_size = 11, base_family = "",
  base_line_size = base_size/22, base_rect_size = base_size/22)

dark_theme_linedraw(base_size = 11, base_family = "",
  base_line_size = base_size/22, base_rect_size = base_size/22)
```

## Arguments

```
base_size      base font size
base_family    base font family
base_line_size base size for line elements
base_rect_size base size for rect elements
```

## Details

**‘dark\_theme\_gray’** Dark version of `theme_gray()`, the signature ‘ggplot2’ theme with a grey background and white gridlines, designed to put the data forward yet make comparisons easy.

**‘dark\_theme\_bw’** Dark version of `theme_bw()`, the classic dark-on-light ‘ggplot2’ theme. May work better for presentations displayed with a projector.

**‘dark\_theme\_linedraw’** Dark version of `theme_linedraw()`, a theme with only black lines of various widths on white backgrounds, reminiscent of a line drawings. Serves a purpose similar to `theme_bw()`. Note that this theme has some very thin lines ( $\ll 1$  pt) which some journals may refuse.

**‘dark\_theme\_light’** Dark version of `theme_light()`, a theme similar to `theme_linedraw()` but with light grey lines and axes, to direct more attention towards the data.

**‘dark\_theme\_dark’** Dark version of `theme_dark()`, the dark cousin of `theme_light()`, with similar line sizes but a dark background. Useful to make thin coloured lines pop out.

**‘dark\_theme\_minimal’** Dark version of `theme_minimal()`, a minimalistic theme with no background annotations.

**‘dark\_theme\_classic’** Dark version of `theme_classic()`, a classic-looking theme, with x and y axis lines and no gridlines.

**‘dark\_theme\_void’** Dark version of `theme_void()`, a completely empty theme.

**‘dark\_theme\_test’** Dark version of `theme_test()`, a theme for visual unit tests. It should ideally never change except for new features.

## Examples

```
library(ggplot2)

mtcars2 <- within(mtcars, {
  vs <- factor(vs, labels = c("V-shaped", "Straight"))
  am <- factor(am, labels = c("Automatic", "Manual"))
  cyl <- factor(cyl)
  gear <- factor(gear)
})

p1 <- ggplot(mtcars2) +
```

```

geom_point(aes(x = wt, y = mpg, colour = gear)) +
labs(title = "Fuel economy declines as weight increases",
      subtitle = "(1973-74)",
      caption = "Data from the 1974 Motor Trend US magazine.",
      tag = "Figure 1",
      x = "Weight (1000 lbs)",
      y = "Fuel economy (mpg)",
      colour = "Gears")

p1 + dark_theme_gray()
p1 + dark_theme_bw()
p1 + dark_theme_linedraw()
p1 + dark_theme_light() # quite dark
p1 + dark_theme_dark() # quite light
p1 + dark_theme_minimal()
p1 + dark_theme_classic()
p1 + dark_theme_void()

# Theme examples with panels

p2 <- p1 + facet_grid(vs ~ am)

p2 + dark_theme_gray()
p2 + dark_theme_bw()
p2 + dark_theme_linedraw()
p2 + dark_theme_light() # quite dark
p2 + dark_theme_dark() # quite light
p2 + dark_theme_minimal()
p2 + dark_theme_classic()
p2 + dark_theme_void()

```

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|              |                        |
|--------------|------------------------|
| invert_color | <i>Invert color(s)</i> |
|--------------|------------------------|

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## Description

Invert a vector of colors, provided the colors are valid hex codes or have valid names (i.e., they belong to `base::colors()`), and return a vector of inverted colors in hex code.

## Usage

```

invert_color(color, colour = color)

invert_colour(color, colour = color)

```

## Arguments

|        |                    |
|--------|--------------------|
| color  | color(s) to invert |
| colour | alias of color     |

**Value**

Inverted color(s) in hex code

**Examples**

```
invert_color("white")    # "black"  
invert_color("gray20")   # "gray80"  
invert_color("grey80")   # "grey20"  
invert_color(c("#000000", "#333333")) # "FFFFFF", "#CCCCC"
```

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invert\_geom\_defaults    *Invert geom defaults for fill and color/colour*

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**Description**

Invert geom defaults for fill and color/colour

**Usage**

```
invert_geom_defaults(geoms = get_geoms())
```

**Arguments**

geoms                      List of geoms as ggproto objects

**Examples**

```
library(ggplot2)  
  
p <- ggplot(iris, aes(Sepal.Width, Sepal.Length)) +  
  geom_point() +  
  facet_wrap(~ Species)  
  
p + dark_theme_gray() # geom defaults changed  
  
p + theme_gray() # oh no! geoms are not visible on light background  
  
invert_geom_defaults() # geom defaults changed back  
  
p + theme_gray() # back to normal
```

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|                       |                              |
|-----------------------|------------------------------|
| invert_theme_elements | <i>Invert theme elements</i> |
|-----------------------|------------------------------|

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**Description**

Invert theme elements

**Usage**

```
invert_theme_elements(.theme)
```

**Arguments**

|        |                 |
|--------|-----------------|
| .theme | theme to invert |
|--------|-----------------|

**Value**

Inverted theme

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