

Package ‘unikn’

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Type Package

Title Graphical Elements of the University of Konstanz's Corporate Design

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Description Define and use graphical elements of corporate design manuals in R. The 'unikn' package provides color functions (by defining dedicated colors and color palettes, and commands for changing, viewing, and using them) and styled text elements (e.g., for marking, underlining, or plotting colored titles). The pre-defined range of colors and text functions is based on the corporate design of the University of Konstanz <<https://www.uni-konstanz.de/>>, but can be adapted and extended for other institutions and purposes.

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'plot_util.R' 'plot_box.R' 'plot_box_calls.R' 'plot_text.R'
'plot_text_calls.R' 'plot_themes.R' 'plot_kn.R' 'start_unikn.R'

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Bordeaux	<i>uni.kn color Bordeaux.</i>
----------	-------------------------------

Description

Bordeaux provides the preferred color of `pal_bordeaux` (as an atomic HEX character value) and is defined as `pal_bordeaux[[4]]`.

Usage

Bordeaux

Format

An object of class character of length 1.

Details

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

`pal_bordeaux` for the corresponding color palette; `pal_unikn` for the unkn default color palette with all 5 colors of `pal_seeblau`; `pal_unikn_pref` for a uni.kn color palette with all preferred colors; `seecol` to show color palettes; `usecol` to use color palettes.

Other preferred colors: `Grau`, `Karpfenblau`, `Peach`, `Petrol`, `Pinky`, `Seeblau`, `Seegrueen`, `Signal`

Examples

```
Bordeaux # HEX character "#8E2043" (as value)
all.equal(Bordeaux, pal_bordeaux[[4]]) # TRUE (same HEX values)

seecol(Bordeaux) # view color and details
```

Grau	<i>uni.kn color Grau.</i>
------	---------------------------

Description

Grau provides the preferred color of `pal_grau` (as an atomic HEX character value) and is defined as `pal_grau[[3]]`.

Usage

Grau

Format

An object of class character of length 1.

Details

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

[pal_grau](#) for the corresponding color palette; [pal_unikn](#) for the unikn default color palette with all 5 colors of [pal_seeblau](#); [pal_unikn_pref](#) for a uni.kn color palette with all preferred colors; [seecol](#) to show color palettes; [usecol](#) to use color palettes.

Other preferred colors: [Bordeaux](#), [Karpfenblau](#), [Peach](#), [Petrol](#), [Pinky](#), [Seeblau](#), [Seegrueen](#), [Signal](#)

Examples

```
Grau # HEX character "#9AA0A7" (as value)
all.equal(Grau, pal_grau[[3]]) # TRUE (same HEX values)

seecol(Grau) # view color and details
```

```
grepal
```

Get a vector of colors whose names match a regular expression.

Description

grepal returns a vector of colors whose names match a regular expression (regex).

Usage

```
grepal(pattern, x = colors(), ignore_case = TRUE)
```

Arguments

pattern	A regular expression (specified as a string/character object).
x	A vector of R color names or a data frame of named colors (i.e., whose names can be searched). Default: <code>x = colors()</code> .
ignore_case	Should the case of pattern be ignored (passed to <code>ignore.case</code> of the <code>grep</code> function)? Default: <code>ignore_case = TRUE</code> .

Details

By default, the base R vector of named colors (i.e., `colors()`) is searched for names matching a pattern (which can be a simple string or regular expression).

If `x` (i.e., the object to be searched) is provided, it must be a vector of color names or a data frame of named color objects (e.g., a color palette).

The name `grepal` is an abbreviation of `grep` and `"pal"`.

See Also

[defpal](#) to define color palettes; [seepal](#) to plot color palettes; [usecol](#) to use a color palette.

Other color functions: [newpal\(\)](#), [seecol\(\)](#), [usecol\(\)](#)

Examples

```
grepal("cyan")

# With regular expressions:
some_grey <- grepal("gr(a|e)y")
start_grey <- grepal("^gr(a|e)y")
only_grey <- grepal("^gr(a|e)y$")

length(some_grey)
length(only_grey)

# With other color objects (df as x):
grepal("blau", x = pal_unikn)
grepal("SEE", x = pal_unikn_pref)

# Applications:
seecol(grepal("white"), col_bg = "lightblue2", title = "See 'white' colors()")

olives <- grepal("olive")
oranges <- grepal("orange")
seecol(list(olives, oranges),
       pal_names = c("olives", "oranges"),
       title = "Comparing olives and oranges")

seecol(grepal("SEE", pal_unikn), title = "All 'SEE' colors in pal_unikn")
seecol(grepal("blau", pal_unikn_pref), title = "All 'blau' colors in pal_unikn_pref")
```

heading

Plot a heading (as marked text elements).

Description

`heading` plots 1 or more text strings (provided as a character vector `labels`) as a heading to an (existing or new) plot and places a colored box behind each label to mark it (i.e., highlighting the heading).

Usage

```
heading(
  labels,
  x = 0,
  y = 0.8,
  y_layout = "flush",
  col = "black",
  col_bg = "default",
  cex = 2,
  font = 2,
  new_plot = "slide"
)
```

Arguments

labels	A character vector specifying the text labels to be plotted.
x	A numeric vector of x-coordinates at which the text labels in labels should be written. If the lengths of x and y differ, the shorter one is recycled. Default: x = 0.
y	A numeric vector of y-coordinates at which the text labels in labels should be written. If the lengths of x and y differ, the shorter one is recycled. Default: y = .8.
y_layout	A numeric value or vector for the vertical spacing of labels in labels. 2 special values are "even" (i.e., even distribution of labels across available y-space) and "flush" (i.e., no space between adjacent labels, or y_layout = 0). Default: y_layout = "flush".
col	The color(s) of the text label(s). Default: col_lbl = "black".
col_bg	The color(s) to highlight or fill the rectangle(s) with. Default: col_bg = "default" (to automatically select different shades of pal_seeblau).
cex	Numeric character expansion factor(s), multiplied by par("cex") to yield the character size(s). Default: cex = 2.
font	The font type(s) to be used. Default: font = 2 (i.e., bold).
new_plot	Boolean: Should a new plot be generated? Set to "blank" or "slide" to create a new plot, and to "none" to add to an existing plot. Default: new_plot = "slide" (i.e., create a new slide).

Details

Text formatting parameters (like col, col_bg, cex, font) are recycled to match length(labels). heading uses the base graphics system graphics::.

See Also

[slide](#) and [xbox](#) to create simple plots (without text).

Examples

```
heading(labels = c("This is a headline", "containing two lines."))

# Note the warning:
heading(labels = c("Headlines", "with 3 or more lines",
                  "should not be arranged", "in such a step-wise fashion."))

# Avoiding the warning:
heading(labels = c("Headlines with", "3 or more lines should",
                  "not be arranged", "in a step-wise fashion."))

# Using non-default colors:
heading(labels = c("Ene,", "mene, miste,", "es rappelt", "in der Kiste."),
        cex = 1.6, col = "white", col_bg = usecol(c(Pinky, Seegrueen, Bordeaux, Karpfenblau)))

#' @family text functions
```

Karpfenblau

uni.kn color Karpfenblau.

Description

Karpfenblau provides the preferred color of `pal_karpfenblau` (as an atomic HEX character value) and is defined as `pal_karpfenblau[[4]]`.

Usage

Karpfenblau

Format

An object of class character of length 1.

Details

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

`pal_karpfenblau` for the corresponding color palette; `pal_unikn_pref` for a uni.kn color palette with all preferred colors; `pal_unikn` for the default uni.kn color palette; `seecol` to show color palettes; `usecol` to use color palettes.

Other preferred colors: `Bordeaux`, `Grau`, `Peach`, `Petrol`, `Pinky`, `Seeb blau`, `Seegrueen`, `Signal`

Examples

```
Karpfenblau # HEX character "#3E5496" (as value)
all.equal(Karpfenblau, pal_karpfenblau[[4]]) # TRUE (same HEX values)

seecol(Karpfenblau) # view color and details
```

mark

Plot marked (or highlighted) text elements.

Description

mark plots 1 or more text strings (provided as a character vector labels) to an (existing or new) plot and places a colored box behind each label to mark it (i.e., highlight or make it stand out from the background).

Usage

```
mark(
  labels,
  x = 0,
  y = 0.55,
  y_layout = "even",
  col = "black",
  col_bg = Seeblau,
  cex = 2,
  font = 2,
  new_plot = "none"
)
```

Arguments

labels	A character vector specifying the text labels to be plotted.
x	A numeric vector of x-coordinates at which the text labels in labels should be written. If the lengths of x and y differ, the shorter one is recycled. Default: x = 0.
y	A numeric vector of y-coordinates at which the text labels in labels should be written. If the lengths of x and y differ, the shorter one is recycled. Default: y = .55.
y_layout	A numeric value or vector for the vertical spacing of labels in labels. 2 special values are "even" (i.e., even distribution of labels across available y-space) and "flush" (i.e., no space between adjacent labels, or y_layout = 0). Default: y_layout = "even".
col	The color(s) of the text label(s). Default: col_lbl = "black".
col_bg	The color(s) to highlight or fill the rectangle(s) with. Default: col_bg = Seeblau.

cex	Numeric character expansion factor(s), multiplied by <code>par("cex")</code> to yield the character size(s). Default: <code>cex = 2</code> .
font	The font type(s) to be used. Default: <code>font = 2</code> (i.e., bold).
new_plot	Should a new plot be generated? Set to "blank" or "slide" to create a new plot. Default: <code>new_plot = "none"</code> (i.e., add to an existing plot).

Details

The positions of the text elements in labels can be specified by providing their coordinates (as `x` and `y` arguments) or by providing an initial position and an `y_layout` (see below).

Text formatting parameters (like `col`, `col_bg`, `cex`, `font`) are recycled to match `length(labels)`.

`mark` uses the base graphics system `graphics::`.

See Also

[slide](#) and [xbox](#) to create simple plots (without text).

Other text functions: [post\(\)](#), [uline\(\)](#), [url_unikn\(\)](#)

Examples

```
# Basics:
mark(labels = "This is a test.", new_plot = "blank") # create a new blank plot
mark(labels = "More testing here...", y = .45, col_bg = pal_pinky[[2]]) # add to plot

# Example:
# (a) Mark text on an existing plot:
plot(x = 0, y = 0, type = "n", xlim = c(0, 1), ylim = c(0, 1), xlab = "", ylab = "")
mark(x = 0, y = .8, labels = "Mark (on an existing plot)") # uses existing plot

# (b) Mark text on a new plot:
mark(x = 0, y = .8, labels = "Mark (and create a new plot)",
     new_plot = "slide") # starts a new plot

# (c) More text and decorations:
mark(x = 0, y = c(.60, .50),
     labels = c("Highlighting text is simple", "and effective"),
     cex = 1.5, col_bg = c(pal_seeblau[[2]], pal_seeblau[[1]]))

mark(labels = c("It is also flexible", "but to be handled with care"),
     x = .4, y = .3, y_layout = "flush", cex = 1.2,
     col = c("white", "black"), col_bg = c(pal_seeblau[[5]], "gold"))
```

 newpal

Define new color palettes.

Description

newpal allows defining new color palettes (as data frames).

Usage

```
newpal(col, names = NA, as_df = FALSE)
```

Arguments

col	A required vector of colors (specified by their R color names, HEX codes, or RGB values).
names	An optional character vector of names. Default: names = NA, yielding numeric names.
as_df	Should the new color palette be returned as a data frame (rather than as a vector)? Default: as_df = FALSE.

See Also

[seepal](#) to plot color palettes; [usecol](#) to use a color palette.

Other color functions: [grepal\(\)](#), [seecol\(\)](#), [usecol\(\)](#)

Examples

```
newpal(col = c("black", "white"), names = c("dark", "bright"))

# Example: 3 ways of defining a new color palette:

# (1) From R color names: -----
pal_flag_de <- newpal(col = c("black", "firebrick3", "gold"),
  names = c("Schwarz", "Rot", "Gold"))

seecol(pal_flag_de, title = "Colors in the flag of Germany")

# (2) From HEX values: -----
# (a) Google logo colors:
# Source: https://www.schemecolor.com/google-logo-colors.php
color_google <- c("#4285f4", "#34a853", "#fbbc05", "#ea4335")
names_google <- c("blueberry", "sea green", "selective yellow", "cinnabar")
pal_google <- newpal(color_google, names_google)
seecol(pal_google, title = "Colors of the Google logo", col_brd = "white", lwd_brd = 10)

# (b) German flag revised:
# Based on a different source at
```

```

# <https://www.schemecolor.com/germany-flag-colors.php>:
pal_flag_de_2 <- newpal(col = c("#000000", "#dd0000", "#ffce00"),
  names = c("black", "red", "gold")
)
seecol(pal_flag_de_2, title = "Colors of the German flag (www.schemecolor.com)")

# (c) MPG colors:
pal_mpg <- newpal(col = c("#007367", "white", "#D0D3D4"),
  names = c("mpg green", "white", "mpg grey")
)
seecol(pal_mpg, title = "Colors of the Max Planck Society")

# (3) From RGB values: -----
# Barrier-free color palette
# Source: Okabe & Ito (2002): Color Universal Design (CUD):
# Fig. 16 of <https://jfly.uni-koeln.de/color/>:

# (a) Vector of colors (as RGB values):
o_i_colors <- c(rgb( 0, 0, 0, maxColorValue = 255), # black
  rgb(230, 159, 0, maxColorValue = 255), # orange
  rgb( 86, 180, 233, maxColorValue = 255), # skyblue
  rgb( 0, 158, 115, maxColorValue = 255), # green
  rgb(240, 228, 66, maxColorValue = 255), # yellow
  rgb( 0, 114, 178, maxColorValue = 255), # blue
  rgb(213, 94, 0, maxColorValue = 255), # vermillion
  rgb(204, 121, 167, maxColorValue = 255) # purple
)

# (b) Vector of color names:
o_i_names <- c("black", "orange", "skyblue", "green", "yellow", "blue", "vermillion", "purple")

# (c) Use newpal() to combine colors and names:
pal_okabe_ito <- newpal(col = o_i_colors,
  names = o_i_names)

seecol(pal_okabe_ito,
  title = "Color-blind friendly color scale (Okabe & Ito, 2002)")

# Compare custom color palettes:
my_pals <- list(pal_flag_de, pal_flag_de_2, pal_google, pal_mpg, pal_okabe_ito)
seecol(my_pals, col_brd = "white", lwd_brd = 5,
  title = "Comparing custom color palettes")

```

pal_bordeaux

uni.kn bordeaux color palette.

Description

pal_bordeaux provides an additional uni.kn color palette as a data frame containing 5 colors (shades of [Bordeaux](#)).

Usage

```
pal_bordeaux
```

Format

An object of class `data.frame` with 1 rows and 5 columns.

Details

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

[pal_unikn](#) for the unikn default color palette with all 5 colors of [pal_seeblau](#); [pal_peach](#) and [pal_pinky](#) for alternative redish uni.kn color palettes; [pal_unikn_pref](#) for a uni.kn color palette with all preferred colors; [seecol](#) to show and use color palettes.

Other color palettes: [pal_grau](#), [pal_karpfenblau](#), [pal_peach](#), [pal_petrol](#), [pal_pinky](#), [pal_seeblau](#), [pal_seegrueen](#), [pal_signal](#), [pal_unikn_dark](#), [pal_unikn_light](#), [pal_unikn_pair](#), [pal_unikn_ppt](#), [pal_unikn_pref](#), [pal_unikn_web](#), [pal_unikn](#)

Examples

```
pal_bordeaux
dim(pal_bordeaux) # 1 5
pal_bordeaux[4]   # preferred (named) color "bordeaux4"
pal_bordeaux[[4]] # preferred color "bordeaux4" OR "#8E2043"

# Plotting palette:
seecol(pal_bordeaux)
```

pal_grau

uni.kn grau color palette.

Description

`pal_grau` provides an additional uni.kn color palette as a data frame containing 5 colors (shades of [Grau](#) or grey).

Usage

```
pal_grau
```

Format

An object of class `data.frame` with 1 rows and 5 columns.

Details

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

[pal_unikn](#) for the unikn default color palette with all 5 colors of [pal_seeblau](#); [pal_unikn_pref](#) for a uni.kn color palette with all preferred colors; [seecol](#) to show color palettes; [usecol](#) to use color palettes.

Other color palettes: [pal_bordeaux](#), [pal_karpfenblau](#), [pal_peach](#), [pal_petrol](#), [pal_pinky](#), [pal_seeblau](#), [pal_seegruen](#), [pal_signal](#), [pal_unikn_dark](#), [pal_unikn_light](#), [pal_unikn_pair](#), [pal_unikn_ppt](#), [pal_unikn_pref](#), [pal_unikn_web](#), [pal_unikn](#)

Examples

```
pal_grau
dim(pal_grau) # 1 5
pal_grau[3] # preferred (named) color "grau3"
pal_grau[[3]] # preferred color "grau3" OR "#9AA0A7"

# Plotting palette:
seecol(pal_grau)
```

pal_karpfenblau	<i>uni.kn karpfenblau color palette.</i>
-----------------	--

Description

pal_karpfenblau provides an additional uni.kn color palette as a data frame containing 5 colors (shades of [Karpfenblau](#) or blue carp).

Usage

```
pal_karpfenblau
```

Format

An object of class `data.frame` with 1 rows and 5 columns.

Details

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

[pal_unikn](#) for the unikn default color palette with all 5 colors of [pal_seeblau](#); [pal_seeblau](#) for the default seeblau uni.kn color palette; [pal_unikn_pref](#) for a uni.kn color palette with all preferred colors; [seecol](#) to show and use color palettes.

Other color palettes: [pal_bordeaux](#), [pal_grau](#), [pal_peach](#), [pal_petrol](#), [pal_pinky](#), [pal_seeblau](#), [pal_seegruen](#), [pal_signal](#), [pal_unikn_dark](#), [pal_unikn_light](#), [pal_unikn_pair](#), [pal_unikn_ppt](#), [pal_unikn_pref](#), [pal_unikn_web](#), [pal_unikn](#)

Examples

```
pal_karpfenblau
dim(pal_karpfenblau) # 1 5
pal_karpfenblau[4]   # preferred (named) color "karpfenblau4"
pal_karpfenblau[[4]] # preferred color "karpfenblau4" OR "#3E5496"

# Plotting palette:
seecol(pal_karpfenblau)
```

pal_peach	<i>uni.kn peach color palette.</i>
-----------	------------------------------------

Description

pal_peach provides an additional uni.kn color palette as a data frame containing 5 colors (shades of [Peach](#)).

Usage

```
pal_peach
```

Format

An object of class `data.frame` with 1 rows and 5 columns.

Details

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

[pal_unikn](#) for the unikn default color palette with all 5 colors of [pal_seeblau](#); [pal_pinky](#) and [pal_bordeaux](#) for alternative redish uni.kn color palettes; [pal_unikn_pref](#) for a uni.kn color palette with all preferred colors; [seecol](#) to show color palettes; [usecol](#) to use color palettes.

Other color palettes: [pal_bordeaux](#), [pal_grau](#), [pal_karpfenblau](#), [pal_petrol](#), [pal_pinky](#), [pal_seeblau](#), [pal_seegruen](#), [pal_signal](#), [pal_unikn_dark](#), [pal_unikn_light](#), [pal_unikn_pair](#), [pal_unikn_ppt](#), [pal_unikn_pref](#), [pal_unikn_web](#), [pal_unikn](#)

Examples

```

pal_peach
dim(pal_peach) # 1 5
pal_peach[4]   # preferred (named) color "peach4"
pal_peach[[4]] # preferred color "peach4" OR "#FEA090"

# Plotting palette:
seecol(pal_peach)

```

pal_petrol	<i>uni.kn petrol color palette.</i>
------------	-------------------------------------

Description

pal_petrol provides an additional uni.kn color palette as a data frame containing 5 colors (shades of [Petrol](#) or [grue](#)).

Usage

```
pal_petrol
```

Format

An object of class `data.frame` with 1 rows and 5 columns.

Details

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details, and https://en.wikipedia.org/wiki/New_riddle_of_induction for the portmanteau "grue".

See Also

[pal_unikn](#) for the unikn default color palette with all 5 colors of [pal_seeblau](#); [pal_seegruen](#) for an alternative green/grue uni.kn color palette; [pal_unikn_pref](#) for a uni.kn color palette with all preferred colors; [seecol](#) to show color palettes; [usecol](#) to use color palettes.

Other color palettes: [pal_bordeaux](#), [pal_grau](#), [pal_karpfenblau](#), [pal_peach](#), [pal_pinky](#), [pal_seeblau](#), [pal_seegruen](#), [pal_signal](#), [pal_unikn_dark](#), [pal_unikn_light](#), [pal_unikn_pair](#), [pal_unikn_ppt](#), [pal_unikn_pref](#), [pal_unikn_web](#), [pal_unikn](#)

Examples

```

pal_petrol
dim(pal_petrol) # 1 5
pal_petrol[4]   # preferred (named) color "petrol4"
pal_petrol[[4]] # preferred color "petrol4" OR "#077187"

```

```
# Plotting palette:
seecol(pal_petrol)
```

pal_pinky	<i>uni.kn pinky color palette.</i>
-----------	------------------------------------

Description

pal_pinky provides an additional uni.kn color palette as a data frame containing 5 colors (shades of [Pinky](#) or pink).

Usage

```
pal_pinky
```

Format

An object of class `data.frame` with 1 rows and 5 columns.

Details

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

[pal_unikn](#) for the unikn default color palette with all 5 colors of [pal_seeblau](#); [pal_peach](#) and [pal_bordeaux](#) for alternative redish uni.kn color palettes; [pal_unikn_pref](#) for a uni.kn color palette with all preferred colors; [seecol](#) to show color palettes; [usecol](#) to use color palettes.

Other color palettes: [pal_bordeaux](#), [pal_grau](#), [pal_karpfenblau](#), [pal_peach](#), [pal_petrol](#), [pal_seeblau](#), [pal_seegruen](#), [pal_signal](#), [pal_unikn_dark](#), [pal_unikn_light](#), [pal_unikn_pair](#), [pal_unikn_ppt](#), [pal_unikn_pref](#), [pal_unikn_web](#), [pal_unikn](#)

Examples

```
pal_pinky
dim(pal_pinky) # 1 5
pal_pinky[4]   # preferred (named) color "pinky4"
pal_pinky[[4]] # preferred color "pinky4" OR "#E0607E"

# Plotting palette:
seecol(pal_pinky)
```

pal_seeblau	<i>uni.kn seeblau color palette.</i>
-------------	--------------------------------------

Description

pal_seeblau provides an additional uni.kn color palette as a data frame containing 5 colors (shades of Seeblau).

Usage

```
pal_seeblau
```

Format

An object of class `data.frame` with 1 rows and 5 columns.

Details

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

[pal_unikn](#) for the unikn default color palette with all 5 colors of [pal_seeblau](#); [pal_karpfenblau](#) for an alternative blue uni.kn color palette; [pal_unikn_pref](#) for a uni.kn color palette with all preferred colors; [seecol](#) to show color palettes; [usecol](#) to use color palettes.

Other color palettes: [pal_bordeaux](#), [pal_grau](#), [pal_karpfenblau](#), [pal_peach](#), [pal_petrol](#), [pal_pinky](#), [pal_seegrueen](#), [pal_signal](#), [pal_unikn_dark](#), [pal_unikn_light](#), [pal_unikn_pair](#), [pal_unikn_ppt](#), [pal_unikn_pref](#), [pal_unikn_web](#), [pal_unikn](#)

Examples

```
pal_seeblau
dim(pal_seeblau) # 1 5

# Preferred color:
pal_seeblau[3] # preferred (named) color "seeblau3" (as df)
pal_seeblau[[3]] # preferred color value "#59C7EB"

# Access by position:
pal_seeblau[3] # named color "seeblau3" (as df)
pal_seeblau[[3]] # color value "#59C7EB"

# Access by name:
pal_unikn["seeblau3"] # color "seeblau3" (as df)
pal_unikn[["seeblau3"]] # color value "#59C7EB"

# Plotting palette:
seecol(pal_seeblau)
```

pal_seegruen	<i>uni.kn seegruen color palette.</i>
--------------	---------------------------------------

Description

pal_seegruen provides an additional uni.kn color palette as a data frame containing 5 colors (shades of [Seegruen](#)).

Usage

```
pal_seegruen
```

Format

An object of class `data.frame` with 1 rows and 5 columns.

Details

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

[pal_unikn](#) for the unikn default color palette with all 5 colors of [pal_seeblau](#); [pal_petrol](#) for an alternative green uni.kn color palette; [pal_unikn_pref](#) for a uni.kn color palette with all preferred colors; [seecol](#) to show color palettes; [usecol](#) to use color palettes.

Other color palettes: [pal_bordeaux](#), [pal_grau](#), [pal_karpfenblau](#), [pal_peach](#), [pal_petrol](#), [pal_pinky](#), [pal_seeblau](#), [pal_signal](#), [pal_unikn_dark](#), [pal_unikn_light](#), [pal_unikn_pair](#), [pal_unikn_ppt](#), [pal_unikn_pref](#), [pal_unikn_web](#), [pal_unikn](#)

Examples

```
pal_seegruen
dim(pal_seegruen) # 1 5
pal_seegruen[4] # preferred (named) color "seegruen4"
pal_seegruen[[4]] # preferred color "seegruen4" OR "#0A9086"

# Plotting palette:
seecol(pal_seegruen)
```

pal_signal	<i>uni.kn signal (Ampel) color palette.</i>
------------	---

Description

pal_signal provides an additional uni.kn color palette as a data frame containing 3 colors (Ampel or traffic signal colors).

Usage

```
pal_signal
```

Format

An object of class `data.frame` with 1 rows and 3 columns.

Details

The colors are arranged as in a traffic light ("Ampel"):

1. top: red or "bad"
2. mid: yellow or "alert"
3. bot: green or "good"

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

[pal_unikn](#) for the unikn default color palette with all 5 colors of [pal_seeblau](#); [pal_unikn_pref](#) for a uni.kn color palette with all preferred colors; [seecol](#) to show and use color palettes.

Other color palettes: [pal_bordeaux](#), [pal_grau](#), [pal_karpfenblau](#), [pal_peach](#), [pal_petrol](#), [pal_pinky](#), [pal_seeblau](#), [pal_seegrueen](#), [pal_unikn_dark](#), [pal_unikn_light](#), [pal_unikn_pair](#), [pal_unikn_ppt](#), [pal_unikn_pref](#), [pal_unikn_web](#), [pal_unikn](#)

Examples

```
pal_signal
dim(pal_signal) # 1 3
pal_signal[2]   # (named) color "signal2"
pal_signal[[2]] # color "signal2" OR "#EFDC60"

# Plotting palette:
seecol(pal_signal)
```

pal_unikn *unikn default color palette (11 colors).*

Description

pal_unikn combines the 5 blue colors from color palette [pal_seeblau](#) with the 6 non-blue colors of [pal_unikn](#) to a palette containing 11 color values.

Usage

```
pal_unikn
```

Format

An object of class `data.frame` with 1 rows and 11 columns.

Details

Adding `seeblau5` (i.e., `pal_seeblau[1]`) to the default color palette [pal_unikn](#) also puts white at the central (middle) position of a palette with 11 values:

`pal_unikn[[6]]` is white or `"#FFFFFF"`.

This is useful when creating color gradients.

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

[pal_unikn](#) for the default uni.kn color palette; [pal_seeblau](#) for the uni.kn seeblau color palette; [seecol](#) to show color palettes; [usecol](#) to use color palettes.

Other color palettes: [pal_bordeaux](#), [pal_grau](#), [pal_karpfenblau](#), [pal_peach](#), [pal_petrol](#), [pal_pinky](#), [pal_seeblau](#), [pal_seegrueen](#), [pal_signal](#), [pal_unikn_dark](#), [pal_unikn_light](#), [pal_unikn_pair](#), [pal_unikn_ppt](#), [pal_unikn_pref](#), [pal_unikn_web](#)

Examples

```
pal_unikn
dim(pal_unikn)      # 1 11

# Access by position:
pal_unikn[1]        # new color "seeblau5" (as df)
pal_unikn[[1]]     # new color value "#008ECE"

# Access by name:
pal_unikn["seeblau5"] # new color "seeblau5" (as df)
pal_unikn[["seeblau5"]] # new color value "#008ECE"

# Plotting palette:
```

```
seecol(pal_unikn)

# Note:
pal_unikn[6] # "white" or "#FFFFFF" as central of 11 colors
```

pal_unikn_dark	<i>uni.kn dark colors in a color palette.</i>
----------------	---

Description

pal_unikn_dark provides an additional uni.kn color palette that collects 2 dark colors of 4 color palettes as a data frame containing 8 colors (in 4 pairs).

Usage

```
pal_unikn_dark
```

Format

An object of class data.frame with 1 rows and 10 columns.

Details

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

[pal_unikn_light](#) for a lighter uni.kn color palette; [pal_unikn_pair](#) for a pairwise uni.kn color palette; [pal_unikn](#) for the default uni.kn color palette; [seecol](#) to show color palettes; [usecol](#) to use color palettes.

Other color palettes: [pal_bordeaux](#), [pal_grau](#), [pal_karpfenblau](#), [pal_peach](#), [pal_petrol](#), [pal_pinky](#), [pal_seeblau](#), [pal_seegruen](#), [pal_signal](#), [pal_unikn_light](#), [pal_unikn_pair](#), [pal_unikn_ppt](#), [pal_unikn_pref](#), [pal_unikn_web](#), [pal_unikn](#)

Examples

```
pal_unikn_dark
dim(pal_unikn_dark) # 1 8
pal_unikn_dark[1]   # color "karpfenblau5" by position
pal_unikn_dark[[1]] # color value by position: "#324376"
pal_unikn_dark["karpfenblau5"] # color value by name

# Plotting palette:
seecol(pal_unikn_dark)
```

pal_unikn_light	<i>uni.kn light colors in a color palette.</i>
-----------------	--

Description

pal_unikn_light provides an additional uni.kn color palette that collects 2 light colors of 4 color palettes as a data frame containing 8 colors (in 4 pairs).

Usage

```
pal_unikn_light
```

Format

An object of class `data.frame` with 1 rows and 10 columns.

Details

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

[pal_unikn_dark](#) for a darker uni.kn color palette; [pal_unikn_pair](#) for a pairwise uni.kn color palette; [pal_unikn](#) for the default uni.kn color palette; [seecol](#) to show color palettes; [usecol](#) to use color palettes.

Other color palettes: [pal_bordeaux](#), [pal_grau](#), [pal_karpfenblau](#), [pal_peach](#), [pal_petrol](#), [pal_pinky](#), [pal_seeblau](#), [pal_seegrueen](#), [pal_signal](#), [pal_unikn_dark](#), [pal_unikn_pair](#), [pal_unikn_ppt](#), [pal_unikn_pref](#), [pal_unikn_web](#), [pal_unikn](#)

Examples

```
pal_unikn_light
dim(pal_unikn_light) # 1 8

# Access by position:
pal_unikn_light[1] # color "seeblau3" (as df)
pal_unikn_light[[1]] # color value "#59C7EB"

# Access by name:
pal_unikn_light["seeblau3"] # color "seeblau3" (as df)
pal_unikn_light[["seeblau3"]] # color value "#59C7EB"

# Plotting palette:
seecol(pal_unikn_light)
```

pal_unikn_pair	<i>uni.kn pairwise colors in a color palette.</i>
----------------	---

Description

pal_unikn_pair provides an additional uni.kn color palette that collects 16 paired colors of 8 color palettes as a data frame containing 16 colors (in 8 pairs).

Usage

```
pal_unikn_pair
```

Format

An object of class data.frame with 1 rows and 16 columns.

Details

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

[pal_unikn_light](#) for a lighter uni.kn color palette; [pal_unikn_dark](#) for a darker uni.kn color palette; [pal_unikn](#) for the default uni.kn color palette; [seecol](#) to show color palettes; [usecol](#) to use color palettes.

Other color palettes: [pal_bordeaux](#), [pal_grau](#), [pal_karpfenblau](#), [pal_peach](#), [pal_petrol](#), [pal_pinky](#), [pal_seeblau](#), [pal_seegrueen](#), [pal_signal](#), [pal_unikn_dark](#), [pal_unikn_light](#), [pal_unikn_ppt](#), [pal_unikn_pref](#), [pal_unikn_web](#), [pal_unikn](#)

Examples

```
pal_unikn_pair
dim(pal_unikn_pair) # 1 16
pal_unikn_pair[1]   # color "karpfenblau4" by position
pal_unikn_pair[[1]] # color value by position: "#3E5496"
pal_unikn_pair["karpfenblau4"] # color value by name

# Plotting palette:
seecol(pal_unikn_pair)
```

pal_unikn_ppt *uni.kn secondary color palette (ppt version).*

Description

pal_unikn_ppt provides an alternative uni.kn color palette as a data frame containing 10 colors.

Usage

```
pal_unikn_ppt
```

Format

An object of class `data.frame` with 1 rows and 10 columns.

Details

This is a secondary (ppt) variant with more muted colors.

See [pal_unikn](#) for the primary/default (web/sRGB) scale and <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

[pal_unikn](#) for the unikn default color palette with all 5 colors of [pal_seeblau](#); [pal_unikn_pref](#) for a uni.kn color palette with all preferred colors; [seecol](#) to show color palettes; [usecol](#) to use color palettes.

Other color palettes: [pal_bordeaux](#), [pal_grau](#), [pal_karpfenblau](#), [pal_peach](#), [pal_petrol](#), [pal_pinky](#), [pal_seeblau](#), [pal_seegrueen](#), [pal_signal](#), [pal_unikn_dark](#), [pal_unikn_light](#), [pal_unikn_pair](#), [pal_unikn_pref](#), [pal_unikn_web](#), [pal_unikn](#)

Examples

```
pal_unikn_ppt
dim(pal_unikn_ppt) # 1 10

# Access by position:
pal_unikn_ppt[2] # 2nd named color "seeblau3" (as df)
pal_unikn_ppt[[2]] # 2nd color value "#59B6DC"

# Access by name:
pal_unikn_ppt["seeblau3"] # color "seeblau3" (as df)
pal_unikn_ppt[["seeblau3"]] # color value "#59B6DC"

# Plotting palette:
seecol(pal_unikn_ppt)
```

pal_unikn_pref	<i>uni.kn preferred colors in a color palette.</i>
----------------	--

Description

pal_unikn_pref provides an additional uni.kn color palette that collects the preferred color of each palette as a data frame containing 9 (or 8 + 1) colors.

Usage

```
pal_unikn_pref
```

Format

An object of class `data.frame` with 1 rows and 9 columns.

Details

The colors are arranged in a sequence that provides high contrasts between adjacent colors.

Note that the (alert) color [Signal](#) is not a preferred color according to the official color definition.

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

[pal_unikn](#) for the default uni.kn color palette; [seecol](#) to show color palettes; [usecol](#) to use color palettes.

Other color palettes: [pal_bordeaux](#), [pal_grau](#), [pal_karpfenblau](#), [pal_peach](#), [pal_petrol](#), [pal_pinky](#), [pal_seeblau](#), [pal_seegrueen](#), [pal_signal](#), [pal_unikn_dark](#), [pal_unikn_light](#), [pal_unikn_pair](#), [pal_unikn_ppt](#), [pal_unikn_web](#), [pal_unikn](#)

Examples

```
pal_unikn_pref
dim(pal_unikn_pref) # 1 9

# Access by position:
pal_unikn_pref[1] # color Seeblau (as df)
pal_unikn_pref[[1]] # color value "#59C7EB"

# Access by name:
pal_unikn_pref["Seeblau"] # color "seeblau3" (as df)
pal_unikn_pref[["Seeblau"]] # color value "#59C7EB"

# Plotting palette:
seecol(pal_unikn_pref)
```

pal_unikn_web *uni.kn default color palette.*

Description

pal_unikn_web provides the default uni.kn color palette as a data frame containing 10 colors.

Usage

```
pal_unikn_web
```

Format

An object of class `data.frame` with 1 rows and 10 columns.

Details

This is the primary (web/sRGB) scale.

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

[pal_unikn](#) for the unikn default color palette with all 5 colors of [pal_seeblau](#); [pal_unikn_ppt](#) for an alternative (ppt) version; [pal_unikn_pref](#) for a uni.kn color palette with all preferred colors; [seecol](#) to show color palettes; [usecol](#) to use color palettes.

Other color palettes: [pal_bordeaux](#), [pal_grau](#), [pal_karpfenblau](#), [pal_peach](#), [pal_petrol](#), [pal_pinky](#), [pal_seeblau](#), [pal_seegrueen](#), [pal_signal](#), [pal_unikn_dark](#), [pal_unikn_light](#), [pal_unikn_pair](#), [pal_unikn_ppt](#), [pal_unikn_pref](#), [pal_unikn](#)

Examples

```
pal_unikn_web
dim(pal_unikn_web) # 1 10

# Access by position:
pal_unikn_web[2]   # 2nd named color "seeblau3" (as df)
pal_unikn_web[[2]] # 2nd color value "#59C7EB"

# Access by name:
pal_unikn_web["seeblau3"] # color "seeblau3" (as df)
pal_unikn_web[["seeblau3"]] # color value "#59C7EB"

# Plotting palette:
seecol(pal_unikn_web)
```

Peach	<i>uni.kn color Peach.</i>
-------	----------------------------

Description

Peach provides the preferred color of `pal_peach` (as an atomic HEX character value) and is defined as `pal_peach[[4]]`.

Usage

Peach

Format

An object of class character of length 1.

Details

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

`pal_peach` for the corresponding color palette; `pal_unikn` for the unikn default color palette with all 5 colors of `pal_seeblau`; `pal_unikn_pref` for a uni.kn color palette with all preferred colors; `seecol` to show and use color palettes.

Other preferred colors: `Bordeaux`, `Grau`, `Karpfenblau`, `Petrol`, `Pinky`, `Seeblau`, `Seegruen`, `Signal`

Examples

```
Peach # HEX character "#FEA090" (as value)
all.equal(Peach, pal_peach[[4]]) # TRUE (same HEX values)

seecol(Peach) # view color and details
```

Petrol	<i>uni.kn color Petrol.</i>
--------	-----------------------------

Description

Petrol provides the preferred color of `pal_petrol` (as an atomic HEX character value) and is defined as `pal_petrol[[4]]`.

Usage

Petrol

Format

An object of class character of length 1.

Details

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

[pal_petrol](#) for the corresponding color palette; [pal_unikn](#) for the unikn default color palette with all 5 colors of [pal_seeblau](#); [pal_unikn_pref](#) for a uni.kn color palette with all preferred colors; [seecol](#) to show color palettes; [usecol](#) to use color palettes.

Other preferred colors: [Bordeaux](#), [Grau](#), [Karpfenblau](#), [Peach](#), [Pinky](#), [Seeblau](#), [Seegrueen](#), [Signal](#)

Examples

```
Petrol # HEX character "#077187" (as value)
all.equal(Petrol, pal_petrol[[4]]) # TRUE (same HEX values)

seecol(Petrol) # view color and details
```

Pinky

uni.kn color Pinky.

Description

Pinky provides the preferred color of [pal_pinky](#) (as an atomic HEX character value) and is defined as [pal_pinky\[\[4\]\]](#).

Usage

```
Pinky
```

Format

An object of class character of length 1.

Details

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

[pal_pinky](#) for the corresponding color palette; [pal_unikn](#) for the unikn default color palette with all 5 colors of [pal_seeblau](#); [pal_unikn_pref](#) for a uni.kn color palette with all preferred colors; [seecol](#) to show color palettes; [usecol](#) to use color palettes.

Other preferred colors: [Bordeaux](#), [Grau](#), [Karpfenblau](#), [Peach](#), [Petrol](#), [Seeblau](#), [Seegrueen](#), [Signal](#)

Examples

```
Pinky # HEX character "#E0607E" (as value)
all.equal(Pinky, pal_pinky[[4]]) # TRUE (same HEX values)

seecol(Pinky) # view color and details
```

```
post                               Post text (in an xbox).
```

Description

`post` plots 1 or more text strings (provided as a character vector `labels`) to an (existing or new) [xbox](#).

Usage

```
post(
  labels,
  x = 0.03,
  y = 0.55,
  y_layout = "even",
  col = "white",
  col_bg = Seeblau,
  cex = 1,
  font = 1,
  new_plot = "none"
)
```

Arguments

<code>labels</code>	A character vector specifying the text labels to be plotted.
<code>x</code>	A numeric vector of x-coordinates at which the text labels in <code>labels</code> should be written. If the lengths of <code>x</code> and <code>y</code> differ, the shorter one is recycled. Default: <code>x = 0.03</code> .
<code>y</code>	A numeric vector of y-coordinates at which the text labels in <code>labels</code> should be written. If the lengths of <code>x</code> and <code>y</code> differ, the shorter one is recycled. Default: <code>y = 0.55</code> .

<code>y_layout</code>	A numeric value or vector for the vertical spacing of labels in labels. 2 special values are "even" (i.e., even distribution of labels across available y-space) and "flush" (i.e., no space between adjacent labels, or <code>y_layout = 0</code>). Default: <code>y_layout = "even"</code> .
<code>col</code>	The color(s) of the text label(s). Default: <code>col_lbl = "white"</code> .
<code>col_bg</code>	The background color(s) of the <code>xbox</code> . Default: <code>col_bg = Seeblau</code> .
<code>cex</code>	Numeric character expansion factor(s), multiplied by <code>par("cex")</code> to yield the character size(s). Default: <code>cex = 1.0</code> .
<code>font</code>	The font type(s) to be used. Default: <code>font = 1</code> (i.e., plain text).
<code>new_plot</code>	Should a new plot be generated? Set to "xbox" to plot to a basic <code>xbox</code> (with square dimensions, i.e., <code>dim = c(1,1)</code>). Default: <code>new_plot = "none"</code> (i.e., assumes a pre-existing <code>xbox</code>).

Details

The positions of the text elements in labels can be specified by providing their coordinates (as `x` and `y` arguments) or by providing an initial position and an `y_layout` (see below).

Text formatting parameters (like `col`, `col_bg`, `cex`, `font`) are recycled to match `length(labels)`.

`post` uses the base graphics system `graphics::`.

See Also

`xbox` to create a new `xbox` (without text).

Other text functions: `mark()`, `uline()`, `url_unikn()`

Examples

```
post(labels = "Post this line with default settings.", new_plot = "xbox")

# Create a new xbox:
post(labels = "This is a test.", new_plot = "xbox",
      cex = 1.2, font = 2, col_bg = pal_seeblau[[5]])

# Add text to an existing xbox:
post(labels = c("More text follows here,",
               "yet another line here,",
               "and even more here."),
      y = .4, y_layout = .04,
      new_plot = "none")
```

Seeblau	<i>uni.kn color Seeblau.</i>
---------	------------------------------

Description

Seeblau provides the preferred color of `pal_seeblau` (as an atomic HEX character value) and is defined as `pal_seeblau[[3]]`.

Usage

Seeblau

Format

An object of class character of length 1.

Details

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

`pal_seeblau` for the corresponding color palette; `pal_unikn` for the unikn default color palette with all 5 colors of `pal_seeblau`; `pal_unikn_pref` for a uni.kn color palette with all preferred colors; `seecol` to show color palettes; `usecol` to use color palettes.

Other preferred colors: [Bordeaux](#), [Grau](#), [Karpfenblau](#), [Peach](#), [Petrol](#), [Pinky](#), [Seegrueen](#), [Signal](#)

Examples

```
Seeblau # HEX character "#59C7EB" (as value)
all.equal(Seeblau, pal_seeblau[[3]]) # TRUE (same HEX values)

seecol(Seeblau) # view color and details
```

seecol	<i>Plot color palettes (to see their colors).</i>
--------	---

Description

`seecol` provides an interface to plotting (or "seeing") the colors of a palette or comparing multiple color palettes.

Usage

```
seecol(
  pal = "unikn_all",
  n = "all",
  alpha = NA,
  hex = NULL,
  rgb = NULL,
  col_bg = NULL,
  col_brd = NULL,
  lwd_brd = NULL,
  grid = TRUE,
  title = NA,
  mar_note = NA,
  pal_names = NA,
  ...
)
```

Arguments

pal	A single color palette (as a vector of colors), multiple color palettes (as a list), or a recognized keyword (as a character string). Default: <code>pal = "unikn_all"</code> . Recognized keywords are: <ol style="list-style-type: none"> 1. <code>"unikn_all"</code>: All color palettes defined in <code>unikn</code> 2. <code>"unikn_basic"</code>: All basic palettes. 3. <code>"pair_all"</code>: All palettes with pairwise colors. 4. <code>"pref_all"</code>: All preferred colors and their gradients. 5. <code>"grad_all"</code>: <code>seecol</code> does also recognize keywords (e.g., <code>"all_unikn"</code>) or keywords without <code>"unikn"</code> (e.g., <code>"basic"</code>).
n	Number of colors to show or use. If <code>n</code> is lower or higher than the length of the current color palette <code>pal</code> , the color palette is reduced or extrapolated (using <code>grDevices::colorRampPalette</code>). Default: <code>n = "all"</code> (i.e., show all colors in palette).
alpha	A factor modifying the opacity <code>alpha</code> (as in adjustcolor); typically in $[0,1]$. If used, the value is shown in the plot title. Default: <code>alpha = NA</code> (i.e., no modification of opacity).
hex	Should HEX color values be shown? Default: <code>hex = NULL</code> (i.e., show HEX color values when there is sufficient space to print them).
rgb	Should RGB color values be shown? Default: <code>rgb = NULL</code> (i.e., show RGB color values when there is sufficient space to print them).
col_bg	Color of plot background. Default: <code>col_bg = NULL</code> .
col_brd	Color of shape borders (if shown). Default: <code>col_brd = NULL</code> .
lwd_brd	Line width of shape borders (if shown). Default: <code>lwd_brd = NULL</code> .
grid	Show grid in the color plot? Default: <code>grid = TRUE</code> .

<code>title</code>	Plot title (as a character string). Default: <code>title = NA</code> creates a default title.
<code>mar_note</code>	Optional margin note (on bottom right). Default: <code>mar_note = NA</code> (i.e., no margin note).
<code>pal_names</code>	Names of color palettes or colors (as a character vector). Default: <code>pal_names = NA</code> (for default names).
<code>...</code>	Other graphical parameters (passed to <code>plot</code>).

Details

`seecol` has 2 main modes, based on the contents of its `pal` argument:

1. if `pal = "unikn_all"` or a list of multiple color palettes:
Plot visual vectors of all current color palettes for comparing them.
2. if `pal` is set to a specific color palette (or a vector of multiple colors or color palettes):
Plot the current color palette and optional details on its colors.

The `title` and `pal_names` arguments add control over plotted text labels. However, the length of a character vector provided to `pal_names` must correspond to the number of (custom) color palettes or colors.

See Also

[usecol](#) for using a color palette; [pal_unikn](#) for the default uni.kn color palette.

Other color functions: [grepal\(\)](#), [newpal\(\)](#), [usecol\(\)](#)

Examples

```
# See multiple color palettes:
seecol() # default: seecol(pal = "all")

# See details of one color palette:
seecol(pal_unikn) # see a specific color palette

# Combining colors or color palettes:
seecol(c(rev(pal_seeblau), pal_seegrue)) # combine color palettes
seecol(c(rev(pal_seeblau), "white", pal_pinky)) # combine color palettes and color names
seecol(c("black", "firebrick", "gold")) # combine color names

# Using n to reduce or extend color palettes:
seecol(n = 3) # viewing reduced ranges of all palettes
seecol(n = 12) # viewing extended ranges of all palettes

seecol(pal_unikn, n = 5,
       title = "Reduced version of pal_unikn (n = 5)") # reducing pal_unikn
seecol(pal_seeblau, n = 8,
       title = "Extended version of pal_seeblau (n = 8)") # extending pal_seeblau

# Combining and extending color palettes:
seecol(c(rev(pal_seeblau), "white", pal_bordeaux), n = 17,
       title = "Diverging custom color palette (with 17 colors)")
```

```

# Defining custom color palettes:
pal_mpg <- c("#007367", "white", "#D0D3D4") # mixing hex values and color names
names(pal_mpg) <- c("mpg green", "mpg white", "mpg grey") # color names

pal_bdg <- usecol(c(Bordeaux, "gold"), n = 10) # using usecol

# Viewing extended color palette:
seecol(pal_mpg, n = 9, title = "Custom color palette of the Max Planck Society")

# Comparing (and labeling) custom color palettes:
seecol(list(pal_mpg, pal_bdg, pal_unikn), n = 7,
        pal_names = c("Max Planck", "Bordeaux-Gold", "Uni Konstanz"),
        title = "Comparing and labeling custom color palettes")

## Viewing color palettes from other packages:
# library(RColorBrewer)
# seecol(brewer.pal(name = "RdBu", n = 11)) # viewing "RdBu" palette from RColorBrewer

## Extending color palettes:
# seecol(brewer.pal(name = "RdBu", n = 11), n = 15) # extending palette to 15 colors

```

Seegruen

uni.kn color Seegruen.

Description

Seegruen provides the preferred color of [pal_seegruen](#) (as an atomic HEX character value) and is defined as `pal_seegruen[[4]]`.

Usage

Seegruen

Format

An object of class character of length 1.

Details

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

[pal_seegruen](#) for the corresponding color palette; [pal_unikn](#) for the unikn default color palette with all 5 colors of [pal_seeblau](#); [pal_unikn_pref](#) for a uni.kn color palette with all preferred colors; [seecol](#) to show color palettes; [usecol](#) to use color palettes.

Other preferred colors: [Bordeaux](#), [Grau](#), [Karpfenblau](#), [Peach](#), [Petrol](#), [Pinky](#), [Seeblau](#), [Signal](#)

Examples

```
Seegrueen # HEX character "#0A9086" (as value)
all.equal(Seegrueen, pal_seegrueen[[4]]) # TRUE (same HEX values)

seecol(Seegrueen) # view color and details
```

Signal	<i>uni.kn color Signal or alert.</i>
--------	--------------------------------------

Description

Signal provides the alert color of `pal_signal` (as an atomic HEX character value) and is defined as `pal_signal[2]`.

Usage

```
Signal
```

Format

An object of class character of length 1.

Details

The official specification of `pal_signal` does not identify a preferred color. We provide Signal as a dedicated color as it is suited for creating color gradients (see `usecol`).

See <https://www.uni-konstanz.de/en/university/news-and-media/create-online-and-print-media/corporate-design/> for details.

See Also

`pal_signal` for the corresponding color palette; `pal_unikn` for the unikn default color palette with all 5 colors of `pal_seeblau`; `pal_unikn_pref` for a uni.kn color palette with all preferred colors; `seecol` to show color palettes; `usecol` to use color palettes.

Other preferred colors: `Bordeaux`, `Grau`, `Karpfenblau`, `Peach`, `Petrol`, `Pinky`, `Seeblau`, `Seegrueen`

Examples

```
Signal # HEX character "#EFDC60" (as value)
all.equal(Signal, pal_signal[[2]]) # TRUE (same HEX values)

seecol(Signal) # view color and details
```

slide	<i>Plot a slide (or frame).</i>
-------	---------------------------------

Description

slide plots an empty slide (or frame) as a colored rectangle.

Usage

```
slide(col = NA, dim = c(4/3, 1), border = grey(0.33, 1), lwd = 1.5)
```

Arguments

col	The color to fill the slide with (i.e., its background color). Default: col = NA (i.e., system default for transparency).
dim	The x- and y-dimensions of the slide. Default: dim = c(4/3, 1) (i.e., unit height, 4/3 wider than high).
border	The color of the slide's border. Setting border = NA hides border. Default: border = grey(.33, 1).
lwd	The line width of the slide's border. Setting lwd = 0 or lwd = NA removes border. Default: lwd = 1.5.

See Also

[heading](#), [line](#), or [mark](#) to add text to a slide; [xbox](#) to plot a box.

Other plot functions: [theme_grau\(\)](#), [theme_unikn\(\)](#), [xbox\(\)](#)

Examples

```
slide() # default slide (or frame)
slide(lwd = NA) # borderless slide

# Dimensions:
slide(dim = c(18, 9)) # larger and 2:1 dimensions

# Formatting:
slide(col = pal_seeblau[[1]], border = pal_seeblau[[5]], lwd = 2)
```

theme_grau	<i>Alternative theme for ggplot2.</i>
------------	---------------------------------------

Description

theme_grau provides an alternative **unikn** theme to use in **ggplot2** commands.

Usage

```
theme_grau(  
  col_title = grey(0, 1),  
  base_size = 11,  
  base_family = "",  
  base_line_size = base_size/22,  
  base_rect_size = base_size/22  
)
```

Arguments

col_title	Color of title (text) elements (optional, numeric). Default: col_title = grey(0, 1) (i.e., "black"). Consider using col_title = unikn::pal_seeblau[[4]].
base_size	Base font size (optional, numeric). Default: base_size = 11.
base_family	Base font family (optional, character). Default: base_family = "". Options include "mono", "sans" (default), and "serif".
base_line_size	Base line size (optional, numeric). Default: base_line_size = base_size/22.
base_rect_size	Base rectangle size (optional, numeric). Default: base_rect_size = base_size/22.

Details

theme_grau is no-nonsense, but fills panel backgrounds in "grau" (specifically, pal_seegrau[[1]]). This theme works well for dark colors and bright color accents, but is of limited use with transparent colors.

See Also

[theme_unikn](#) for default theme.
Other plot functions: [slide\(\)](#), [theme_unikn\(\)](#), [xbox\(\)](#)

Examples

```
# Plotting iris dataset (using ggplot2, theme_grau, and unikn colors):  
  
library('ggplot2') # theme_unikn requires ggplot2
```

```
ggplot(datasets::iris) +
  geom_jitter(aes(x = Sepal.Length, y = Sepal.Width, color = Species), size = 3, alpha = 2/3) +
  facet_wrap(~Species) +
  scale_color_manual(values = usecol(pal = c(Pinky, Seeblau, Seegrueen))) +
  labs(tag = "B",
       title = "Iris sepals",
       caption = "Data from datasets::iris") +
  coord_fixed(ratio = 3/2) +
  theme_grau()
```

 theme_unikn

Basic unikn theme for ggplot2.

Description

theme_unikn provides a basic **unikn** theme to use in **ggplot2** commands.

Usage

```
theme_unikn(
  col_title = pal_seeblau[[4]],
  base_size = 11,
  base_family = "",
  base_line_size = base_size/22,
  base_rect_size = base_size/22
)
```

Arguments

col_title	Color of title (text) elements (optional, numeric). Default: col_title = pal_seeblau[[4]]. Consider using col_title = "black" when data uses Seeblau colors.
base_size	Base font size (optional, numeric). Default: base_size = 11.
base_family	Base font family (optional, character). Default: base_family = "". Options include "mono", "sans" (default), and "serif".
base_line_size	Base line size (optional, numeric). Default: base_line_size = base_size/22.
base_rect_size	Base rectangle size (optional, numeric). Default: base_rect_size = base_size/22.

Details

The theme is lightweight and no-nonsense, but somewhat opinionated (e.g., in using mostly grey scales to allow emphasizing data points with color accents).

See Also

[theme_grau](#) for an alternative theme.

Other plot functions: [slide\(\)](#), [theme_grau\(\)](#), [xbox\(\)](#)

Examples

```
# Plotting iris dataset (using ggplot2, theme_unikn, and unikn colors):

library('ggplot2') # theme_unikn requires ggplot2

ggplot(datasets::iris) +
  geom_jitter(aes(x = Petal.Length, y = Petal.Width, color = Species), size = 3, alpha = 2/3) +
  scale_color_manual(values = usecol(pal = c(Pinky, Seeblau, Seegruen))) +
  labs(tag = "A", title = "Iris petals",
       caption = "Data from datasets::iris") +
  theme_unikn()
```

Plot underlined text elements.

Description

uline plots 1 or more text strings (provided as a character vector labels) to an (existing or new) plot and places a colored line underneath each label (to underline it).

Usage

```
uline(
  labels,
  x = 0,
  y = 0.55,
  y_layout = "even",
  col = "black",
  col_bg = Seeblau,
  cex = 1.5,
  font = 1,
  new_plot = "none"
)
```

Arguments

labels A character vector specifying the text labels to be plotted.

x	A numeric vector of x-coordinates at which the text labels in labels should be written. If the lengths of x and y differ, the shorter one is recycled. Default: x = 0.
y	A numeric vector of y-coordinates at which the text labels in labels should be written. If the lengths of x and y differ, the shorter one is recycled. Default: y = .55.
y_layout	A numeric value or vector for the vertical spacing of labels in labels. 2 special values are "even" (i.e., even distribution of labels across available y-space) and "flush" (i.e., no space between adjacent labels, or y_layout = 0). Default: y_layout = "even".
col	The color(s) of the text label(s). Default: col_lbl = "black".
col_bg	The color(s) of the line (under the text labels of labels). Default: col_bg = Seeblau.
cex	Numeric character expansion factor(s), multiplied by par("cex") to yield the character size(s). Default: cex = 1.5.
font	The font type(s) to be used. Default: font = 1 (i.e., plain text).
new_plot	Boolean: Should a new plot be generated? Set to "blank" or "slide" to create a new plot. Default: new_plot = "none" (i.e., add to an existing plot).

Details

The positions of the text elements in labels can be specified by providing their coordinates (as x and y arguments) or by providing an initial position and an y_layout (see below).

Text formatting parameters (like col, col_bg, cex, font) are recycled to match length(labels).

uline uses the base graphics system graphics::.

See Also

[slide](#) and [xbox](#) to create simple plots (without text).

Other text functions: [mark\(\)](#), [post\(\)](#), [url_unikn\(\)](#)

Examples

```
uline(labels = "This is a test.", new_plot = "blank") # create a new blank plot
uline(labels = "More testing here...", y = .33, col_bg = pal_pinky[[2]]) # add to plot

# 2 basic cases:
# (a) Underline text on an existing plot:
plot(x = 0, y = 0, type = "n", xlim = c(0, 1), ylim = c(0, 1), xlab = "", ylab = "")
uline(x = 0, y = .8, labels = "Underline text (on an existing plot)") # add to plot

# (b) Underline text on a new plot:
uline(x = .02, y = .80, labels = "Underline text (on a new plot)",
      new_plot = "slide") # create a new plot

# Example:
lbl_line <- c("This is neat, true, and terribly important.")
```



```
uline(labels = lbl_line, new_plot = "blank") # create a new plot
uline(labels = "(which is why we underline it).", y = .40, cex = 1.2) # add to plot
```

unikn.guide	<i>Opens the unikn package guides</i>
-------------	---------------------------------------

Description

Opens the unikn package guides

Usage

```
unikn.guide()
```

url_unikn	<i>url_unikn formats an URL the uni.kn way.</i>
-----------	---

Description

url_unikn removes various patterns (e.g., "http", "https", "://", "www.") from the front of a given URL and returns the remaining character string with a figure dash prefix.

Usage

```
url_unikn(url = "https://www.uni-konstanz.de/")
```

Arguments

url The url to be written (as copied from a web browser).

See Also

[xbox](#) to create a new xbox (without text).

Other text functions: [mark\(\)](#), [post\(\)](#), [uline\(\)](#)

Examples

```
url_unikn("https://www.uni-konstanz.de/")
```

usecol *Use a color or color palette.*

Description

usecol allows using a color or color palette `pal` (e.g., for plotting).

Usage

```
usecol(
  pal = pal_unikn,
  n = "all",
  alpha = NA,
  use_names = FALSE,
  use_col_ramp = FALSE
)
```

Arguments

<code>pal</code>	A color palette (as a vector of colors or color palettes). Default: <code>pal = pal_unikn</code> .
<code>n</code>	An integer value specifying the desired number of colors from the palette. Default: <code>n = "all"</code> (i.e., use all colors of a color palette). For the palettes defined by unikn , <code>n</code> is set to a pre-defined selection of colors if the desired number of colors is smaller than the available number. For all other palettes and values of <code>n</code> larger than <code>length(pal)</code> , <code>n</code> compresses or extends the palette using <code>colorRampPalette</code> .
<code>alpha</code>	A factor modifying the opacity <code>alpha</code> (as in <code>adjustcolor</code>); to a value in <code>[0,1]</code> . Default: <code>alpha = NA</code> (i.e., no modification of opacity).
<code>use_names</code>	A logical value indicating whether colors should be returned as a named vector. Default: <code>use_names = FALSE</code> , for compatibility with <code>ggplot</code> .
<code>use_col_ramp</code>	A logical value specifying whether the default of using pre-selected colors should be overridden and <code>colorRampPalette</code> should be used to process <code>n</code> . Default: <code>use_col_ramp = FALSE</code> .

Details

usecol also allows modifying and combining color palettes in various ways.

Value

A vector of colors (in character format).

See Also

`seecol` to plot color palettes; `pal_unikn` for the default uni.kn color palette.

Other color functions: `grepal()`, `newpal()`, `seecol()`

Examples

```

usecol(pal = pal_unikn, n = "all") # default color palette
usecol(pal = pal_unikn, n = 4)    # selecting n dedicated colors
usecol(pal = pal_unikn, n = 20)   # extending color palette

# Mixing a new color palette:
pal_1 <- usecol(pal = c(rev(pal_seeblau), "white", pal_pinky))
seecol(pal_1)

# Mixing and extending a color palette:
pal_2 <- usecol(pal = c(rev(pal_seegrue), "white", pal_bordeaux), n = 20)
seecol(pal_2)

# Defining and using a custom color palette:
pal_princeton_1 <- c("#E77500", "white", "black")
names(pal_princeton_1) <- c("orange_w", "white", "black")

pal_3 <- usecol(pal_princeton_1, n = 7)
seecol(pal_3)

```

xbox

Plot a box (with x).

Description

xbox plots a box with a cross (x) in its top-right corner.

Usage

```
xbox(col = Seeblau, dim = c(1, 1))
```

Arguments

col	The color to fill the box with (i.e., its background color). Default: col = unlist(seeblau).
dim	The x- and y-dimensions of the box. Default: dim = c(1, 1) (i.e., a unit square).

Details

The cross (x) appears rectangular when viewing the plot at the correct aspect ratio (as defined by dim).

See Also

[post](#) to add text to an xbox; [slide](#) to plot a new slide (or frame).

Other plot functions: [slide\(\)](#), [theme_grau\(\)](#), [theme_unikn\(\)](#)

Examples

```
xbox() # default box

# Options:
xbox(col = Bordeaux)
xbox(dim = c(2, 1)) # 2:1 dimension (wider than high)
```

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