

# **Greatis TColorDialog**

## **Advanced Color Dialog Component**

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## About TCoolorDialog

TCoolorDialog is an advanced replacement for standard TColorDialog.

TCoolorDialog provides:

- selecting color in any of most widespread color models: HSB, RGB, CMY, CMYK
- selecting color from fixed palettes: VGA, Internet (browser-safe), Windows
- creation and editing of reference color
- creation and editing of user colors collection (up to 32 colors)
- the simple changing reference color and user colors by Drag&Drop
- setup of the dialog pages
- setting and getting color in any format: HSB, RGB, CMY, CMYK, TColor
- setting and getting color in string format: RGB Hex string (RRGGBB) and HTML format (#RRGGBB)
- modal and non-modal show modes

## New in TCoolorDialog

### Version 1.3:

- Show method for non-modal displaying of the dialog
- StayOnTop property for non-modal show mode
- OnApply event for applying changes from the dialog when it is displayed
- AutoApply property for immediately OnApply calling when any changes in the dialog
- CMYK color model

## TCoolorDialog Hierarchy

TObject – TPersistent – TComponent

## TCoolorDialog Interface

### Methods

```
constructor Create(AOwner: TComponent); override;
```

Standard constructor overridden for initializing properties.

```
function Execute: Boolean;
```

This function shows TCoolorDialog form in modal mode. This function returns True, if the user close the dialog by OK button, False otherwise.

```
procedure Show;
```

This procedure shows TCoolorDialog form in non-modal mode.

```
procedure DoApply(ForSure: Boolean); virtual;
```

This virtual procedure is called when changes have to be applied. By default this procedure just calls OnApply event. ForSure parameter is True when applying must do without dependence from AutoApply property value (for example, ForSure is True when user pressed OK button in modal mode). If ForSure parameter is False, OnApply is called only when AutoUpdate is True. You can override this method to realize your own apply procedure.

## Properties

### public

```
property HSBColor: THSBColor;  
property RGBColor: TRGBColor;  
property CMYColor: TCMYColor;  
property CMYKColor: TCMYKColor;
```

Read-write properties for setting and getting colors in various color models.

```
property RGBHex: TRGBHex;  
property HTMLColor: THTMLColor;
```

Read-write properties for setting and getting colors in hexadecimal string formats. Format is 'RRGGBB' for RGBHex and '#RRGGBB' for HTMLColor.

```
property UserColors[Index: Integer]: TColor;
```

Array-type read-write property for setting and getting user-defined colors. Index must be between 1 and UserColorCount.

```
property Dialog: TForm;
```

This read-only property points to the dialog form object. If the dialog is not visible, this property contains nil.

```
property Handle: HWND;
```

This read-only property contains dialog window handle or 0 if the dialog is not visible. This is obsolete property used only for compatibility with earlier versions. You have to use Dialog property instead.

### published

```
property Color: TColor;
```

This property contains selected color.

```
property ReferenceColor: TColor;
```

This property contains reference color, displayed near to selected color. User can change reference color by dragging from selected color.

```
property AutoApply: Boolean;
```

If this property is set to True, OnApply is called immediately when user change color in the dialog, otherwise OnApply is called only when user presses Apply or OK button.

property StayOnTop: Boolean;

If this property is set to True dialog remains on top of the desktop and of other forms in the application.

property ActivePage: TDialogPage;

This property contains current active page in the dialog. TDialogPage is defined as:

```
TDialogPage = (  
    pageVGA,           // Standard VGA colors  
    pageInternet,     // Browser-safe palette (216 colors)  
    pageHSB,          // HSB color model page  
    pageRGB,          // RGB color model page  
    pageCMY,          // CMY color model page  
    pageCMYK,         // CMYK color model page  
    pageGray,         // Grayscale page  
    pageWindows,     // Windows items colors  
    pageInfo);       // Color information page
```

property VisiblePages: TDialogPages;

This property determines, which pages will be visible. TDialogPages is defined as:

```
TDialogPages = set of TDialogPage;
```

property Ctl3D: Boolean;

This property determines whether the dialog has a three-dimensional look.

property HelpButton: Boolean;

If this property is set to True, Help button is displayed in the dialog.

property HelpContext: THelpContext;

This property contains context number for online help.

property AutoHelpContext: Boolean;

If this property set to True, help context of the dialog is determines as HelpContext+Ord(ActivePage).

property Caption: string;

Specifies the text in the dialog caption.

## Colors unit

### Types

```
TRealType = Double;
```

Defines main float type for using in the color models records. By default this type is Double, but you can change it.

```
TRGB = record Red,Green,Blue: TRealType end;
```

```
TCMY = record Cyan,Magenta,Yellow: TRealType end;
```

```
TCMYK = record Cyan,Magenta,Yellow,Black: TRealType end;
```

```
THSB = record Hue,Saturation,Brightness: TRealType end;
```

Real-type records for the color models.

```
TRGBColor = record Red,Green,Blue: Integer end;  
TCMYColor = record Cyan,Magenta,Yellow: Integer end;  
TCMYKColor = record Cyan,Magenta,Yellow,Black: Integer  
end;  
THSBColor = record Hue,Saturation,Brightness: Integer  
end;
```

Integer-type records for the color models.

```
THTMLColor = string;  
TRGBHex = string;  
String types for hexadecimal color formats.
```

## Functions

```
function MakeHSB(H,S,B: TRealType): THSB;  
function MakeRGB(R,G,B: TRealType): TRGB;  
function MakeCMY(C,M,Y: TRealType): TCMY;  
function MakeCMYK(C,M,Y,K: TRealType): TCMYK;  
function MakeGrayRGB(B: TRealType): TRGB;  
function MakeGrayColor(B: TRealType): TColor;  
Functions for creating color model records from the values.
```

```
function RGBEqual(Color1,Color2: TRGB): Boolean;  
Function for comparing two RGB colors. This function returns True if colors are  
equal, otherwise False.
```

```
function RGBGray(Color: TRGB): Boolean;  
This function returns True, if RGB color in the parameter is gray (R=G=B), otherwise  
False.
```

```
function HueToColor(Hue: TRealType): TColor;  
function HueToRGB(Hue: TRealType): TRGB;  
These functions return TColor and RGB value for Hue from the parameter. Result of  
these functions is color with highest brightness and saturation.
```

```
function RGBToHue(RGB: TRGB): TRealType;  
function ColorToRGB(Value: TColor): TRGB;  
These functions return hue for the color in the parameter.
```

```
function RGBToColor(Value: TRGB): TColor;  
function RGBToCMY(Value: TRGB): TCMY;  
function CMYToRGB(Value: TCMY): TRGB;  
function ColorToCMY(Value: TColor): TCMY;  
function CMYToColor(Value: TCMY): TColor;  
function RGBToCMYK(Value: TRGB): TCMYK;  
function CMYKToRGB(Value: TCMYK): TRGB;  
function ColorToCMYK(Value: TColor): TCMYK;  
function CMYKToColor(Value: TCMYK): TColor;
```

```
function RGBToHSB(Value: TRGB): THSB;
function HSBToRGB(Value: THSB): TRGB;
function HSBToColor(Value: THSB): TColor;
function ColorToHSB(Value: TColor): THSB;
function RGBToRGBColor(Value: TRGB): TRGBColor;
function RGBColorToRGB(Value: TRGBColor): TRGB;
function HSBToHSBColor(Value: THSB): THSBColor;
function HSBColorToHSB(Value: THSBColor): THSB;
function CMYToCMYColor(Value: TCMY): TCMYColor;
function CMYColorToCMY(Value: TCMYColor): TCMY;
function CMYKToCMYKColor(Value: TCMYK): TCMYKColor;
function CMYKColorToCMYK(Value: TCMYKColor): TCMYK;
function HTMLToColor(Value: THTMLColor): TColor;
function ColorToHTML(Value: TColor): THTMLColor;
function RGBHexToColor(Value: TRGBHex): TColor;
function ColorToRGBHex(Value: TColor): TRGBHex;
```

These functions converts color between color models. Any color may be converted from/to RGB (XXXToRGB, RGBToXXX), TColor (XXXToColor, ColorToXXX), and between real-type and integer-type records (XXXToXXXColor, XXXColorToXXX);

## Contact information

### Greatis TColorDialog

Home page: [www.greatis.com/coolor.htm](http://www.greatis.com/coolor.htm)  
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