



RColours Contents

RColours is a bi-directional resistor colour band converter.

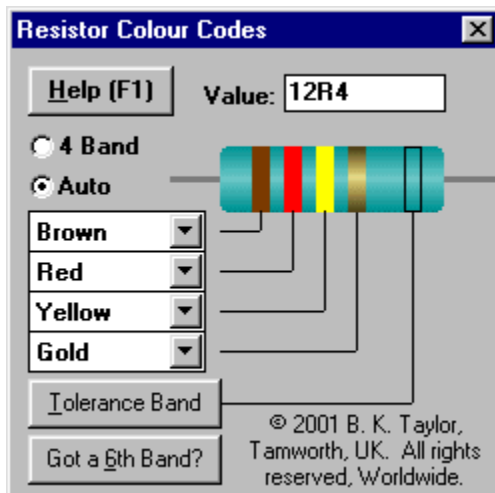
It converts resistor values to the colour bands that will be used on the resistor to represent that value.

OR

It will convert from the colour bands to the value.

Installation.

Click on the following screen image to find out more about the function of the controls:



If you like this program, you may be interested in one of my other programs; Rval.

The RColours program is freeware and you are free to make as many copies as you wish and are encouraged to pass the program on to others who might find it useful. The only thing I ask is that you pass it on complete with all its files (preferably as the original ZIP file) and that you do **not** sell it.

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The copyright of the program, this help file and all other files supplied in RCol100.zip (except cmdialog.vbx) belong to Brian Taylor and have not, nor will they ever be, transferred to any third party.

Cmdialog.vbx is copyrighted by Microsoft® but is free for distribution with an application such as this.

Install / Uninstall

Installation

Simply extract all the files from 'RCol100.zip' into a directory of your choice. You will need a copy of VBrun300.dll either in your 'Windows/system' directory or in the RColours program directory. The former location is better as other Visual Basic V3.0 programs can then share the single copy. The same applies to cmdialog.vbx, although included in the zip file this can be moved to your 'Windows/System' directory if preferred; just check that you are not replacing a more recent version!

For Windows 3.x a Program Manager icon should then be created by dragging the executable file from File Manager into an appropriate program group.

For Windows 95/98/Me, etc. a shortcut can be created on the start menu by right clicking the task bar, selecting 'properties' then 'Start Menu Programs', clicking on the 'Add' button and following the instructions provided.

Alternatively, a shortcut can be created on your desktop by right clicking on the desktop, selecting 'New > Shortcut' and following the instructions provided or dragging the RColours.exe file from Windows Explorer onto your desktop (by default this action creates a shortcut).

To Un-Install

RColours makes no changes to your system files. To remove RColours all that needs to be done is to delete the program directory and all its contents plus any shortcuts you created.

Should you have chosen to keep VBrun300.dll and cmdialog.vbx in your 'Windows/system' directory you may choose to delete these as well, ***BUT ONLY IF YOU ARE SURE THEY ARE NOT USED BY ANYTHING ELSE.***

Entering the Value

The resistor value can be entered as '1.2' or '1R2' with the option to use 'K' or 'M'.

Only one 'decimal point' is allowed, so '1.2K' cannot be entered, you should use '1K2' or '1200' instead.

You are limited to a maximum of 3 significant figures - extra will be ignored or replaced by 0 if entered before the decimal point, e.g. entering 3456 will result in 3450.

Number of Colour Bands

Resistors use either 3 or 4 colour bands to describe their value. Other bands describe the tolerance (or accuracy) of the value or the temperature coefficient.

RColours will default to 3 colour bands which can be used for values with 2 significant digits. If you type a third significant digit RColours will automatically insert a fourth colour band.

Many resistor manufacturers use 4 bands to represent the value even when the value only requires 2 significant digits, so this control can be used to force the program to use the fourth band.

Help (F1)

Clicking the help button or pressing F1 will open this help file.

Value

Entering a value into this box will cause the program to display the colour codes on the resistor below and the names of the colours in the boxes to the left.

This is also the place where the result of setting the colours of the bands will be displayed.

The Resistor

This is a representation of how the resistor will look and should always reflect the value or colours entered.

'Empty' bands are displayed if the program does not have sufficient information to perform a conversion.

Band Colours

The names of the colours are displayed here. Changing the colours using these drop-down lists will cause the program to display the corresponding value in the value box.

Tolerance Band Button

Clicking this button will open a dialogue that explains the colours used for the tolerance band.

Sixth Band Button

Some resistors (normally only the most accurate, that will already use 4 bands for the value), have a 6th band. This is used to indicate the resistor's temperature coefficient. This button will open a dialogue that contains a list of the colours used for this and their meanings.

Help About

Clicking this copyright message opens the Program information dialogue giving the program's Version number, license type and a more detailed copyright notice.



RVal - A Program for Choosing Optimum Resistor Values.

Resistors are normally supplied in ranges that have 6, 12, 24, 48 or 96 values per decade.

RVal helps you select the best pairs of values to produce a given ratio or difference, to connect in series or parallel to produce an exact value, the nearest preferred value to any given value, find the preferred value required in parallel with an existing resistance to produce a desired value or display a list of the values in one decade of any range.

Click on the following sample screen to find out more:

Preferred Resistor Values

File Edit Help

Function: **Pairs making Given Value** Range: **E24**

Required Value: **600R** Existing Value: Within: **Nearest**

The Nearest Pairs to 600R in the E24 Range are:

| Series Pairs: | | | |
|---------------|------|-------|-------|
| R1 | R2 | Value | Error |
| 300R | 300R | 600R | 0.00% |
| 270R | 330R | 600R | 0.00% |
| 240R | 360R | 600R | 0.00% |
| 130R | 470R | 600R | 0.00% |

| Parallel Pairs: | | | |
|-----------------|------|-------|-------|
| R1 | R2 | Value | Error |
| 5K1 | 680R | 600R | 0.00% |
| 3K0 | 750R | 600R | 0.00% |
| 1K5 | 1K0 | 600R | 0.00% |
| 1K2 | 1K2 | 600R | 0.00% |

The program will display its results as soon as it has all the required information. It will automatically re-display the results every time a change is made, e.g. selecting a new range or tolerance.

RVal can be downloaded from <http://homepage.ntlworld.com/taylorfamily1/rval.html>

There is a shortcut file provided with this program.

Choose from the following list of basic functions:

- Find a pair with a given ratio.
- Find a pair with a given difference.
- Series and Parallel pairs making a given value.
- The value required in parallel with an existing value to make a desired value.
- The nearest preferred value to the given value.
- A list of the preferred values in one decade of the range selected.

Choose the resistor value range from which the program should find its values:

- E6 - 6 values per decade.
- E12 - 12 values per decade.
- E24 - 24 values per decade.
- E48 - 48 values per decade.
- E96 - 96 values per decade.

Enter the value or ratio you require here and the program will immediately display the answer below.

The entry of a resistor value is the same as for this RColours program except you are not limited to 3 significant figures.

This is where the existing value is entered when finding the value required in parallel to produce a desired value.

This is also where you can restrict the minimum value that the program uses when searching for a given difference. (The user interface adapts to the function selected).

You can force the program to find the nearest solution or all solutions within a given tolerance, e.g. All solutions that lie within 1% of the desired value.

File Menu:

Print the results or save them to a (tab delimited) text file or append them to an existing file.

Edit Menu:

Copy all or a selected part of the result to the Windows clipboard or paste the required or existing value into the appropriate boxes.

Help Menu:

Open dialogues displaying help on what the program does, how to use it and program version and licence information.

