

# The euflag L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> package\*

## European Union Flag

Peter Flynn

Silmaril Consultants  
Textual Therapy Division  
(peter@silmaril.ie)

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### Summary

This package implements a single command `\euflag` which reproduces the official flag of the European Union (EU) using just the built-in picture environment, with the `xcolor` and `graphicx` packages and the `amssymb` font.

The flag is reproduced at 1em high based on the current font size, so it can be scaled arbitrarily by changing the font size (see examples in the table on page 5).



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\*This document corresponds to euflag v. 0.4 $\beta$ , dated 2019/02/02.

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## Latest changes

### v.0.4 (2019-02-02)

#### Changed the star

- Changed from the bbding `\FiveStar` to the amssymb `\bigstar` command.

### v.0.3 (2019-02-02)

#### Mods to ClassPack

- Added switch in `db2dtx.xsl` to detect the use of a package in its own documentation (as here) and code around the `\PassOptionsToPackage` for `svgnames` on `xcolor`, which was causing an Option Clash error.

### v.0.2 (2019-02-01)

#### Works in table cells

- Fixed bug (a `\vfill`) that was crashing (well, locking up)  $\text{\LaTeX}$  when `\euflag` was used in a table cell.

### v.0.1 (2019-01-31)

#### First version

- Simple picture mode is all that is needed, plus a decent star.

See p. 19 for details of earlier changes.

# 1 Background

This package provides a command `\euflag` for reproducing the flag of the European Union. It follows exactly the official specification. The EU's web site says:

The European flag symbolises both the European Union and, more broadly, the identity and unity of Europe.

**It features a circle of 12 gold stars on a blue background. They stand for the ideals of unity, solidarity and harmony among the peoples of Europe.**

The number of stars has nothing to do with the number of member countries, though the circle is a symbol of unity.

## History of the European flag


The history of the flag goes back to 1955. The Council of Europe — which defends human rights and promotes European culture — chose the present design for its own use. In the years that followed, it encouraged the emerging European institutions to adopt the same flag.

In 1983, the European Parliament decided that the Communities' flag should be that used by the Council of Europe. In 1985, it was adopted by all EU leaders as the official emblem of the European Communities, later to become the European Union. In addition, all European institutions now have their own emblems.

[https://europa.eu/european-union/about-eu/symbols/flag\\_en](https://europa.eu/european-union/about-eu/symbols/flag_en)












The `\euflag` command provides a simple way to use the flag in any  $\LaTeX$  document. Details of construction and spacing are taken from the official specification in <http://publications.europa.eu/code/en/en-5000100.htm>

## 2 Usage


The flag is reproduced at 1em high, with the bottom edge at the current baseline like this:  using the `\euflag` command.

The font size of the enclosing environment can be changed to make the flag appear at any size. In the examples below, the code and the flags are in m-type cells (middle-vertical-align, using the array package), so their apparent baselines differ.

---

<code>{\tiny\euflag}</code>	
<code>{\scriptsize\euflag}</code>	
<code>{\footnotesize\euflag}</code>	
<code>{\small\euflag}</code>	
<code>{\normalsize\euflag}</code>	
<code>{\large\euflag}</code>	
<code>{\Large\euflag}</code>	
<code>{\LARGE\euflag}</code>	
<code>{\huge\euflag}</code>	
<code>{\fontsize{64}{72}\selectfont\euflag}</code>	
<code>{\fontsize{128}{0}\selectfont\euflag}</code>	

---

To move the flag down so that the bottom star's baseline becomes the flag's baseline, use the `\raisebox` command to lower the flag by  $\frac{1}{6}$ em: , eg `\raisebox{-0.167em}{\euflag}`

## 3 Implementation

### 3.1 Auto-initialisation

This section is added automatically by *ClassPack* as a preamble to all classes and style packages. The `fixltx2e` package is no longer preloaded, as its features are now a part of the latest  $\text{\LaTeX}$  kernel.

The code starts with identity and requirements which are generated automatically as needed by the Doc $\text{\TeX}$  system. For details see the `ltxdoc` package documentation.

```
1 \NeedsTeXFormat{LaTeX2e}[2016/02/01]
2 \ProvidesPackage{euflag}[2019/02/02 v0.4
3 European Union Flag]
```

**svgnames** Pass the `svgnames` option to the `xcolor` package if that gets loaded later. This avoids a conflict with any other packages (eg `hyperref`) which use their own default is when they load `xcolor`.

However, we have to make an exception in this case because the package is used in its own documentation, which would cause a duplicate `\PassOptionsToPackage`, so we code around it by testing the current package name against the job name of the calling `.dtx` file — if they are the same, then this is the case in point, and the `\PassOptionsToPackage` command is *not* executed; otherwise it is OK to do so.

```
4 \def\CPK@thispackage{euflag}
5 \edef\CPK@thispackage{\meaning\CPK@thispackage}
6 \edef\CPK@thisjob{\jobname}
7 \edef\CPK@thisjob{\meaning\CPK@thisjob}
8 \ifx\CPK@thispackage\CPK@thisjob
9   %% this is the documentation: omit PassOptionsToPackage
10  \message{Option svgnames not being passed to package xcolor}
11 \else
12  %% this is a user job: include PassOptionsToPackage
13  \message{Option svgnames being passed to package xcolor}
14  \PassOptionsToPackage{svgnames}{xcolor}
15 \fi
```

Thanks to zeroth at

<https://tex.stackexchange.com/questions/44499/>

how-to-test-jobname-compilation-option-within-latex-file/  
54895 for this switch.

### 3.2 Packages required for the package

xcolor Provide color.

```
16 \RequirePackage[svgnames]{xcolor}
17 \@ifundefined{T}{%
18     \newcommand{\T}[2]{\fontencoding{T1}\selectfont#2}}{}}
```

There seems to be a bug in the T1 encoding of some package (unidentified, but possibly xcolor) which uses the command `\T1`, which is an impossibility (no digits allowed in command names). So we fake it here to stop  $\LaTeX$  complaining, by dropping the first argument on the floor.

graphicx Provide for graphics (PNG, JPG, or PDF format (only) for pdflatex; EPS format (only) for standard  $\LaTeX$ ).

```
19 \RequirePackage{graphicx}
```

amssymb Provide for the American Mathematical Society's symbols (see their documentation for details).

```
20 \RequirePackage{amssymb}
```

### 3.3 Changes to package defaults

The only changes are to implement the blue and yellow according to the specification. Note that exact Pantone® colour codes are not available, so the HTML values used on the EU web site are used here. The CMYK values are commented out in the code; they are available for users to test.

PantoneReflexBlue As specified.

```
21 \definecolor{PantoneReflexBlue}{HTML}{003399}
22 %\definecolor{PantoneReflexBlue}{cmyk}{1.00,.67,0,.40}
```

PantoneYellow As specified.

```
23 \definecolor{PantoneYellow}{HTML}{FFCC00}
```

```
24 %\definecolor{PantoneYellow}{cmyk}{0,.2,1,0}
```

We could have just used the Yellow from the xcolor package, but it was felt better to be explicit.

### 3.4 The flag

We now use the `\bigstar` command from the `amssymb` package (earlier versions used the `\FiveStar` command from the `bbding` package, but that did not reliably scale beyond about 100pt).

`\eustar` It needs to scale, so we implement it as a command using `\scalebox`.

```
25 \newcommand{\eustar}{\scalebox{0.1}{\ensuremath{\bigstar}}}
```

This is the only slightly uncertain part of the implementation: the specification calls for the star to be  $\frac{1}{18}$  of the height of the flag, but  $\text{\LaTeX}$  only has access to the bounding-box of the glyph. The value of 0.1 given here is therefore experimental and subject to change in future in the light of feedback.

The command itself is a blue `\colorbox` containing the stars set at the clock-points of a circle in a  $\text{\LaTeX}$  picture environment.

`\euflag` Before the `\colorbox` is used, set the `\fboxsep` length to zero so that there is no border around the box.

```
26 \newcommand{\euflag}{\%  
27   \fboxsep0pt  
28   \colorbox{PantoneReflexBlue}{%
```

The rectangle itself is formed from a `\vbox` 1em high and 1.5em wide. The paragraph skip and indent are zeroed to avoid unwanted space, and the content is centered and made yellow.

```
29     \vbox to1em{%  
30       \hsize1.5em  
31       \parskip0pt  
32       \parindent0pt  
33       \centering  
34       \color{PantoneYellow}%
```



For the picture environment, set the unit to 1em and then divide it by 18. This enables us conveniently to use six units for the axes behind the circle of stars, because the specification says it must have a radius of  $\frac{1}{3}$  of the height (ie  $\frac{6}{18}$ ). The positioning argument was found by trial and error.

```
35         \setlength{\unitlength}{1em}
36         \divide\unitlength by18
37         \begin{picture}(6,6)(-2,3.5)
```

The positioning of the individual stars was found with simple trigonometry. It would have been possible to construct this from a loop cycling through the 12 positions, but it is simpler to do it like this.

```
38         \put(6,0){\eustar}
39         \put(5.196,3){\eustar}
40         \put(3,5.196){\eustar}
41         \put(0,6){\eustar}
42         \put(-3,5.196){\eustar}
43         \put(-5.196,3){\eustar}
44         \put(-6,0){\eustar}
45         \put(-5.196,-3){\eustar}
46         \put(-3,-5.196){\eustar}
47         \put(0,-6){\eustar}
48         \put(3,-5.196){\eustar}
49         \put(5.196,-3){\eustar}
```

Finally, close off the picture environment, and close the containing `\vbox` and other containers.

```
50         \end{picture}%
51     }% end vbox
52 }% end colorbox
53 }% end environment
54 }% end command
```

That's it. Any problems, mail me.

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3.
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```
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%%% Copyright 2005 M. Y. Name
%%
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%% of this license or (at your option) any later version.
%% The latest version of this license is in
%% http://www.latex-project.org/lppl.txt
```



```
%% and version 1.3 or later is part of all distributions of LaTeX
%% version 2005/12/01 or later.
%%
%% This work has the LPPL maintenance status `maintained'.
%%
%% The Current Maintainer of this work is M. Y. Name.
%%
%% This work consists of the files pig.dtx and pig.ins
%% and the derived file pig.sty.
```

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```
%% This work consists of all files listed in manifest.txt.
```

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case, the licensee would be entitled to make reasonable conjectures as to which files comprise the Work.

DRAFT



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EU . . . . .	<b>1</b> , 7	<b>R</b>	
\euflag . . . . .	26	\RequirePackage . . . . .	16, 19, 20
European Union . . . . .	<i>see</i> EU	<b>S</b>	
\eustar . . . . .	<u>25</u> , 38–49	svgnames (option) . . . . .	<u>4</u>
<b>F</b>		<b>U</b>	
\fontencoding . . . . .	18	\unitlength . . . . .	35, 36
<b>G</b>		<b>X</b>	
graphicx (package) . . . . .	<u>19</u>	xcolor (package) . . . . .	<u>16</u>
<b>H</b>			
\hsize . . . . .	30		