

# **pst-blur** package

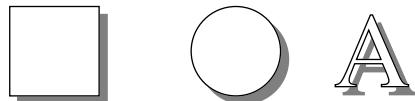
## version 1.0

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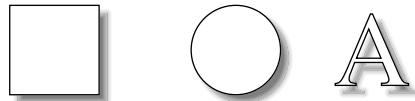
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## 1 Introduction

The ability to paint shadows on arbitrary shapes is a standard feature of PStricks. However, these shadows are always ‘hard’:



The **pst-blur** package provides blurred shadows for closed shapes drawn with PStricks:



It also provides a new box command `\psblurbox`, which is similar to `\psshadowbox`, but gives the box a blurred shadow.

The new graphics parameters and macros provided by the package are described in section 2 of this document. Section 3, if present, documents the implementation consisting of a generic TeX file and a PostScript header for the dvi-to-PostScript converter. You can get section 3 by calling L<sup>A</sup>T<sub>E</sub>X as follows on most relevant systems:

```
latex '\AtBeginDocument{\AlsoImplementation}\input{pst-blur.dtx}'
```

## 2 Package Usage

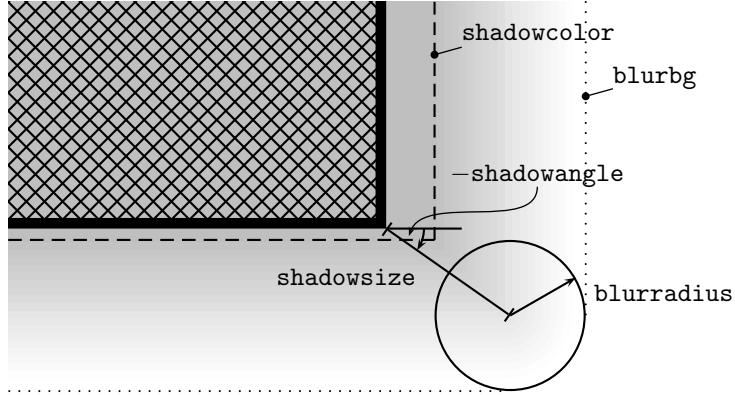
To use **pst-blur**, you have to say

```
\usepackage{pst-blur}
```

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Figure 1: Parameters for blurred shadows



in the document prologue for L<sup>A</sup>T<sub>E</sub>X, and

```
\input pst-blur.tex
```

in “plain” T<sub>E</sub>X.

**blur** To paint shapes with blurred shadows, set the graphics parameters **shadow** and **blur** to **true**, eg

```
\psset{unit=1cm}
\pscircle[shadow=true,blur=true](0,0){0.5}
```

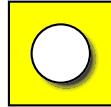


for a circle with a blurred shadow. The parameter **blur** has no influence if **shadow** is **false**.

**shadowsize** The rendering of blurred shadows is controlled by a number of additional graphics parameters. The offset of the shadow is controlled by the parameters **shadowsize** and **shadowangle**, which are the same as for ordinary shadows.<sup>1</sup> The size of the blurring effect is controlled by the parameter **blurradius**, see Fig 1. The default value for **blurradius** is 1.5pt, which fits nicely with the default **shadowsize** of 3pt.

**shadowcolor** The inner, usually darkest part of the shadow is painted in the colour defined by **shadowcolor**. In the range defined by **blurradius**, the colour gradually fades to the background colour set by **blurbg**. The default value for **blurbg** is white. You should change this parameter when you want to paint shapes over a coloured background, ie

```
\psframe[fillstyle=solid,fillcolor=yellow](-.7,-.7)(.7,.7)
\pscircle[shadow=true,blur=true,blurbg=yellow](0,0){0.4}
```




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<sup>1</sup>In particular, **shadowangle** has to be negative for the usual placement of shadows below and to the right of shapes.

**blursteps**      The number of distinct colour steps painted between `shadowcolor` and `blurbg` is controlled by the parameter `blursteps`. The default value for `blursteps` is 20, which is usually more than sufficient. Note, that higher values for `blursteps` result in proportionally slower rendering. This can be very tiresome with complex shapes.

**\psblurbox**      Using a `\psframebox` with a blurred shadow in the middle of some text produces poor results, because TeX does not know about the extra space taken by the shadow. For normal shadows, this problem is solved by the `\psshadowbox` macro, which adds the extra space around the box for the shadow. For blurred shadows, this is not sufficient: an extra `\blurradius` has to be added. This is done by the macro `\psblurbox`, which is otherwise identical to `\psshadowbox`. Note, that `\psblurbox` shares a deficiency of `\psshadowbox`: It only works correctly with `shadowangle = -45`, because TeX does not provide trigonometric operations.