

7 segment displayer with PGF/TIKZ

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1 Outlook

This package has been built to draw seven segment displayer with PGF/TIKZ. Segments are directly displayed in the right color to show the hexadecimal number $(0, \dots, 9, A, \dots, F)$ or decimal $(0, \dots, 15)$.

Unzip the package to your local folder.

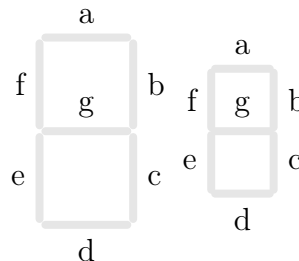
Put on top of your file `\usepackage{SevenSeg}` just below `\documentclass{\ldots}`.

2 Commandes

2.1 Segment letters

To name each segment of the displayer, use the command `\SSGLeg[size]{position}`:

- **size**. This defines the size. Default is 3em
- **position** refers to an existing point. To select the point $(0,0)$ just write `{}`

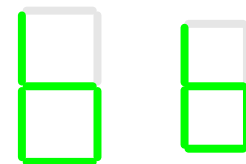


```
\begin{tikzpicture}
\coordinate(A) at(5em,0);
\SSGLeg{}
\SSGLeg[2em]{A}
\end{tikzpicture}
```

2.2 Seven segment displayer

The command `\SSGNb[size]{position}{number}` display the cell with the right lighted segments. Arguments allow to change:

- the **size**. PDefault is 3em
- the **position**. Position refers to an existing point. To select the point $(0,0)$, just write `{}`
- the **number**. Number should be in 0 and 15 or A et F



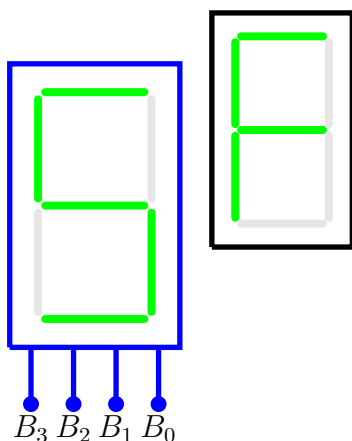
```
\begin{tikzpicture}
\SSGNb[2cm]{}{B}
\coordinate(A)at(5em,0);
\SSGNb[2em]{A}{11}
\end{tikzpicture}
```

2.3 Logical cell

To put a box around the cell, just use the command `SSGBox[Style]{position}` with

- `Style` to change the style. Default is `line width=2pt`
- `position` refers to an existing point. To select the point (0,0), just write `{}`

To change the cell into a seven segment display with binary connections, use `SSGDCB[Style]{position}`. To connect the cell, `positionBit0`, `positionBit1`, `positionBit2` and `positionBit3` refers to the connecting points.

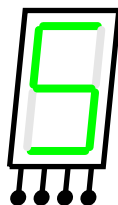


```
\begin{tikzpicture}
\coordinate(A)at(6em,1cm);
\SSGNb{A}{F}
\SSGBox{A}
\def\taille{1.5cm}
\SSGNb[\taille]{5}
\SSGDCB[line width=2pt, blue]{}
\foreach \x in {0,...,3}
{\node at(Bit\x)[below]{$B_\x$};}
\end{tikzpicture}
```

3 Options

3.1 Slanted cell

To slant the cell, use the `xslant` option of PGF/TIKZ, or use a scope environment `\tikzpicture`:



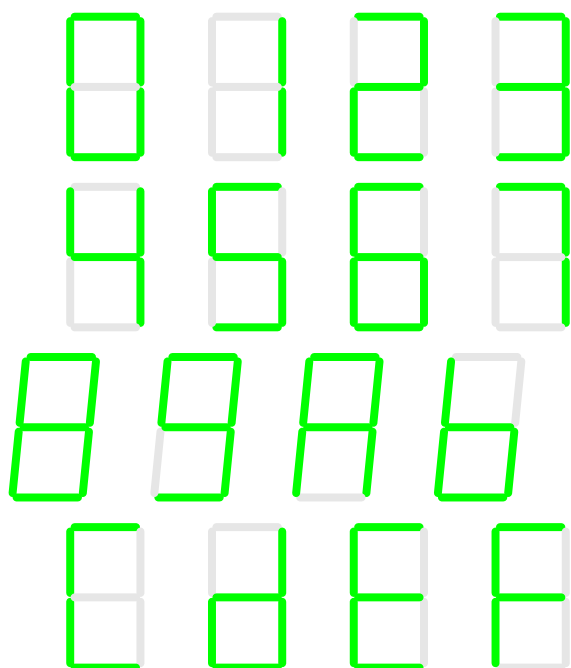
```
\begin{tikzpicture}[xslant=0.1]
\SSGNb{}{5}
\SSGDCB{}
\end{tikzpicture}
```

3.2 Styles

The style is given by `SSGSty`. The style of on (off) segments is `SSGOn` (resp. `SSGOff`).

```
\tikzstyle SSGSty=[line cap=round]
\tikzstyle SSGOn=[green,line width=3pt]
\tikzstyle SSGOff=[gray!20!white,line width=3pt]
```

4 Examples



```

\begin{tikzpicture}[scale=0.8]
\foreach \x in{0,...,3}
{\coordinate (L\x) at({(\x-0)*2.5} ,-3*1);
\SSGNb{L\x}{\x}}
\foreach \x in{4,...,7}
{\coordinate (L\x) at({(\x-4)*2.5} ,-3*2);
\SSGNb{L\x}{\x}}
\begin{scope}[xslant=0.1]
\foreach \x in{8,...,11}
{\coordinate(L\x) at({(\x-8)*2.5} ,-3*3);
\SSGNb{L\x}{\x}}
\end{scope}
\foreach \x in{12,...,15}
{\coordinate (L\x) at({(\x-12)*2.5} ,-3*4);
\SSGNb{L\x}{\x}}
\end{tikzpicture}

```

```

\begin{tikzpicture}
\coordinate(A)at(-6em,0);
\SSGLeg{A}
\begin{scope}[xslant=0.1]
\SSGNb{}{3}
\SSGDCB{}
\end{scope}
\foreach \x in{0,...,1}
{\fill[purple](-7em,-7em-\x*1em)circle(3pt)coordinate(B\x);
\draw[purple,very thick](B\x)node[left]{$B_\x$}--++(14em,0)-|(Bit\x);
\fill[purple](Bit\x|-B\x)circle(3pt);}
\foreach \x in{2,...,3}
{\fill(-7em,-7em-\x*1em)circle(3pt)coordinate(B\x);
\draw[very thick](B\x)node[left]{$B_\x$}--++(14em,0)-|(Bit\x);
\fill(Bit\x|-B\x)circle(3pt);}
\end{tikzpicture}

```

