

# keisenote Package Documentation

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Version 1.1.0 (2025/12/30)

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# 1 Acknowledgements / Credit

This package is based on the code from [VoD's Qiita article](#), with some improvements. The original author has kindly granted permission to release this as a LaTeX package.

## 2 Installation

Place `keisennote.sty` in a directory where LaTeX can find it, e.g., your local `texmf` tree or alongside your document.

Dependencies:

- `xcolor`
- `tikz`
- `zref`, `zref-savepos`, `fp`
- `kvoptions`

Load the package:

Input

```
\usepackage[options]{keisennote}
```

## 3 Package options

This package accepts key–value style options at load time. The option handling is powered by `kvoptions`, with `family=kn` and `prefix=kn@`. All options are declared as string options (accepting any TeX length expression) and are applied during `\ProcessKeyvalOptions*`. The available options and their default values are listed below.

Option name	Default value	Description
<code>linewidth</code>	<code>.5truept</code>	Width of the line used for note drawing. The value is assigned internally to <code>\noteLineWidth@kn</code> . Any TeX length (e.g. <code>1pt</code> , <code>0.6truept</code> , <code>0.2mm</code> ) is accepted.
<code>radius</code>	<code>.8truept</code>	Radius of each dot. Internally stored in <code>\dotsRadius@kn</code> .
<code>distance</code>	<code>6truemm</code>	Spacing between adjacent dots. Internally stored in <code>\noteLineDistance@kn</code> .
<code>triangle</code>	<code>.5pt</code>	Size of triangular markers. Internally stored in <code>\@mag@kn</code> .

Internal behaviour

- Each option is first stored as a string macro (e.g. `\kn@linewidth`), as imposed by `\DeclareStringOption`. The package then assigns it to a `\dimen` register, for example:

```

Input
1 \noteLineWidth@kn=\kn@linewidth\relax
2 \dotsRadius@kn=\kn@radius\relax
3 \noteLineDistance@kn=\kn@distance\relax
4 \@mag@kn=\kn@triangle\relax

```

This conversion ensures that user-supplied expressions such as `1truept` or `0.5mm` are properly interpreted as lengths.

- If the package does not perform this assignment automatically, users may do so manually; however, in normal usage this is handled internally.

## Examples

- Specify options at package load:

```

Input
1 \usepackage[linewidth=1truept, radius=.6truept, distance=8truemm]{
  keisenote}

```

- Modify options afterwards using `\setkeys`:

```

Input
1 \setkeys{kn}{linewidth=0.8pt, distance=5mm}
2 \noteLineWidth@kn=\kn@linewidth\relax % reassign to internal registers if
  needed

```

## Remarks

- Absolute units such as `truept` / `truemm` are used as defaults to avoid driver-dependent scaling.
- No range checks are performed on the option values. Excessively small or negative values may lead to undesirable results. If required, minimum-value guards can be implemented via `\ifdim`.

## 4 Commands

### 4.1 `\notefill`

Input

```
| \notefill[<color>]
```

Fills the current vertical space with ruled notebook lines and dots.

**Example:**

Input

```
| \notefill[green]
```

### 4.2 `\note`

Input

```
| \note{<lines>}[<color>]
```

Typesets a short ruled block with a specified number of lines.

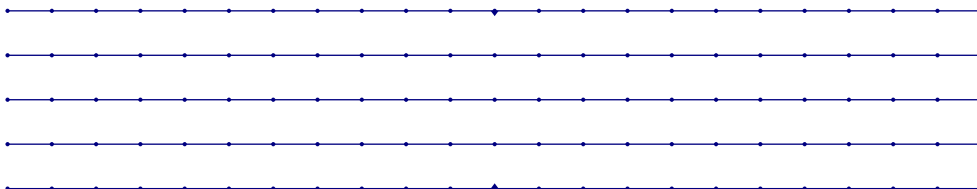
- `<lines>` (mandatory, integer  $\geq 2$ ): number of ruled lines.
- `<color>` (optional, default: white!70!black): color of lines and dots.

**Example:**

Input

```
| \note{5}[NavyBlue]
```

This produces the following output.



Inserting `\bigskip` before (and after) using the `\note` command can sometimes improve the appearance.

### 4.3 `\masumefill`

Input

```
1 \masume[<color>]
```

Fills the current vertical space with grids and dots.

- `<color>` (optional, default: white!70!black): color of lines and dots.

**Example:**

Input

```
1 \notefill[Gray]
```

### 4.4 `\masume`

Input

```
1 \masume{<lines>}[<color>]
```

Typesets a short grid block with a specified number of lines.

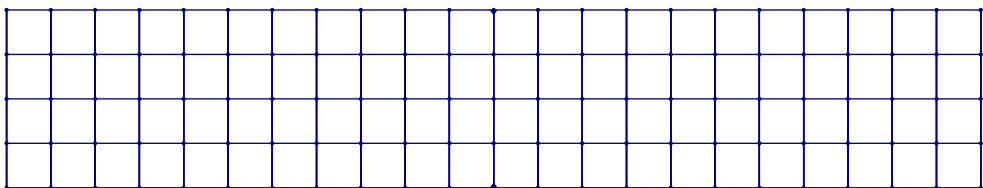
- `<lines>` (mandatory, integer  $\geq 2$ ): number of ruled lines.
- `<color>` (optional, default: white!70!black): color of lines and dots.

**Example:**

Input

```
1 \masume{5}[NavyBlue]
```

This produces the following output.



Inserting `\bigskip` before (and after) using the `\masume` command can sometimes improve the appearance.

## 5 Package Parameters

These dimensions can be adjusted:

`\SetNoteLineWidth` You can set the width of note lines : `\SetNoteLineWidth[2mm]`

`\SetNoteDotRadius` You can set the radius of dots. : `\SetNoteDotRadius[1pt]`

`\SetNoteLineDistance` You can set the distance between each lines.

: `\SetNoteLineDistance[7mm]`

`\SetNoteTriangleSize` You can set the size of triangles. : `\SetNoteTriangleSiz[1pt]`

If no argument is given, the parameter is reset to its default value.

## 6 Examples

### 6.1 Short Note Block

Input

```
1 \note{4}
```

Output:

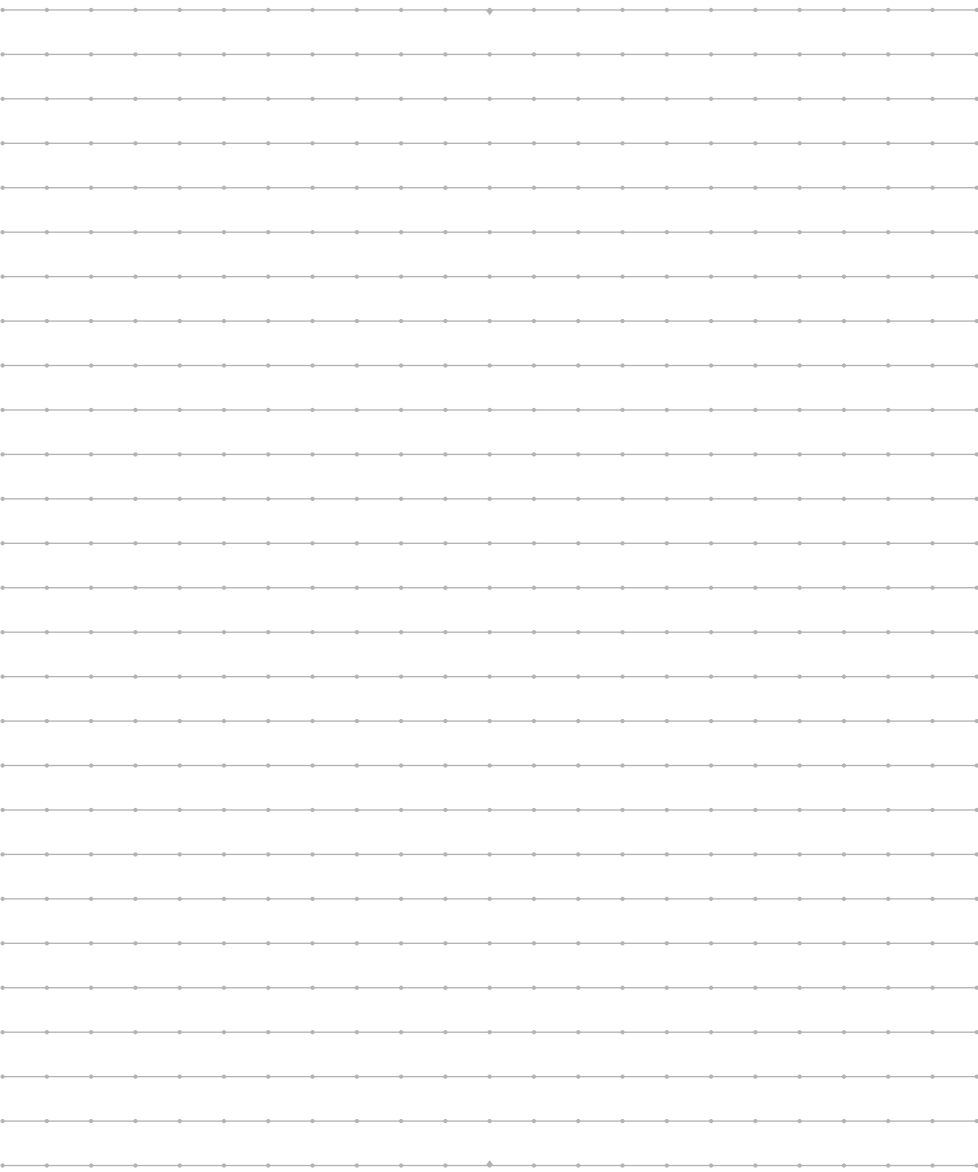


## 6.2 Full Page Fill

Input

```
| \notefill
```

Output:



## 7 License

Released under the [LaTeX Project Public License \(LPPL\) 1.3c](#).

## 8 Version History

- v1.0.0 (2025/09/13) — Initial public release.
- v1.0.3 (2025/09/13) — KKT<sub>EX</sub> added `\masume` and `\masumefill`.
- v1.0.4 (2025/10/4) — KKT<sub>EX</sub> fixed the problem in `\masumefill` and added some package options and setting commands.
- v1.0.4a (2025/10/5) — Added some descriptions about new package options.
- v1.1.0 (2025/12/30) — Changed License.

## 9 Source Code

```
\ProvidesPackage{keisennote}[2025/12/30, v1.1.0]

\RequirePackage[dvipsnames, svgnames, x11names]{xcolor}
\RequirePackage{zref, zref-savepos, fp}
\RequirePackage{tikz}

\RequirePackage{kvoptions}

\SetupKeyvalOptions{%
  family=kn,%
  prefix=kn%
}

\newdimen\noteLineWidth@kn
\noteLineWidth@kn=.5truept

\newdimen\dotsRadius@kn
\dotsRadius@kn=.8truept

\newdimen\noteLineDistance@kn
\noteLineDistance@kn=6truemm

\newdimen\@mag@kn
\@mag@kn=.5pt

%% パッケージオプションの宣言
\DeclareStringOption[.5truept]{linewidth}% 線の太さ
\DeclareStringOption[.8truept]{radius}% ドットの大きさ
\DeclareStringOption[6truemm]{distance}% ドットの間隔
```

```

\DeclareStringOption[.5pt]{triangle}% 三角形の大きさ

\ProcessKeyvalOptions* % オプション適用

%%%オプションの反映
\setlength{noteLineWidth@kn}{\kn@linewidth}
\setlength{dotsRadius@kn}{\kn@radius}
\setlength{noteLineDistance@kn}{\kn@distance}
\setlength{@mag@kn}{\kn@triangle}

%%%途中でパラメータ変更ができるように
\NewDocumentCommand{\SetNoteLineWidth}{0{.5truept}}{%
  \setlength{noteLineWidth@kn}{#1}
}
\NewDocumentCommand{\SetNoteDotRadius}{0{.8truept}}{%
  \setlength{dotsRadius@kn}{#1}
}
\NewDocumentCommand{\SetNoteLineDistance}{0{6truemm}}{%
  \setlength{noteLineDistance@kn}{#1}
}
\NewDocumentCommand{\SetNoteTriangleSize}{0{.5pt}}{%
  \setlength{@mag@kn}{#1}
}

%%%必要な内部レジスタの用意
\newdimen\VDNT@currentXPos
\newdimen\VDNT@currentYPos
\newdimen\VDNT@Xinterval
\newdimen\VDNT@Yinterval
\newdimen\VDNT@notegoal
\def\VDNT@xscaler{.996}

%%% \notefillで用いる座標管理用カウンタの準備
\def\VDNT@pkgname{vodnote}
\global\newcount\VDNT@unique

%%% \notefill の定義
\NewDocumentCommand{\notefill}{ 0{white!70!black} }{\par\bgroup
  \parindent\z@
  %%罫線間隔の算出
  \@tempcnta\linewidth
  \@tempcntb\noteLineDistance@kn
  \FPeval\VDNT@dotsNum{round((\the\@tempcnta/(\the\@tempcntb)/2:0)*2:0)}%
  \VDNT@Xinterval\dimeexpr(\linewidth)/\VDNT@dotsNum\relax
  \VDNT@Yinterval\VDNT@Xinterval
  %%上端の座標取得
  \zsaveposy{\VDNT@pkgname.\the\VDNT@unique.TopPos}%
  %%下端の座標取得

```

```

\leavevmode\vfll\leavevmode
\zsavaposy{\VDNT@pkgname.\the\VDNT@unique.BottomPos}%
%%ノート野線描画幅の決定
\VDNT@notegoal=\dimexpr
  \zposy{\VDNT@pkgname.\the\VDNT@unique.TopPos}sp
  -\zposy{\VDNT@pkgname.\the\VDNT@unique.BottomPos}sp
\relax
%%ノート野線描画
\noindent\smash{%
  \begin{tikzpicture}[xscale=\VDNT@xscaler]
    \VDNT@currentYPos\z@
    \fill[#1] (\VDNT@Xinterval*\VDNT@dotsNum/2,\VDNT@currentYPos+\@mag@kn*4pt) -- ++(\@mag@kn*3pt,-\@mag@kn*4pt) -- ++(-\@mag@kn*6pt,0) -- cycle;
    \@whiledim\VDNT@currentYPos<\VDNT@notegoal\do{
      \VDNT@currentXPos\z@
      \draw[#1,line width=\noteLineWidth@kn] (0,\VDNT@currentYPos) -- (\linewidth,\VDNT@currentYPos);
      \foreach \k in{0,1,...,\VDNT@dotsNum}{%
        \VDNT@currentXPos=\dimexpr\VDNT@Xinterval*\k\relax
        \fill[#1] (\VDNT@currentXPos,\VDNT@currentYPos) circle [radius=\dotsRadius@kn];
      }
      \advance\VDNT@currentYPos\VDNT@Yinterval\relax
    }
    \fill[#1] (\VDNT@Xinterval*\VDNT@dotsNum/2,\VDNT@currentYPos-\VDNT@Yinterval-\@mag@kn*4pt) -- ++(\@mag@kn*3pt,\@mag@kn*4pt) -- ++(-\@mag@kn*6pt,0) -- cycle;
  \end{tikzpicture}%
}%
\egroup
%%座標管理用カウンタのインクリメント
\global\advance\VDNT@unique\@ne
\par
}

```

%%% \note の定義 (2以上の整数を引数に)

```

\NewDocumentCommand{\note}{ m O{white!70!black} }{\par\bgroup
%%野線間隔の算出
\@tempcnta\linewidth
\@tempcntb\noteLineDistance@kn
\FPeval\VDNT@dotsNum{round(round(((\the)\@tempcnta/(\the)\@tempcntb)/2:0)*2:0)}%
\VDNT@Xinterval\dimexpr\linewidth/\VDNT@dotsNum\relax
\VDNT@Yinterval\VDNT@Xinterval
%%ノート野線描画
\noindent
\begin{tikzpicture}[xscale=\VDNT@xscaler]
  \VDNT@currentYPos\z@
  \fill[#2] (\VDNT@Xinterval*\VDNT@dotsNum/2,\VDNT@currentYPos+\VDNT@Yinterval+\@mag@kn*4pt) -- ++(\@mag@kn*3pt,-\@mag@kn*4pt) -- ++(-\@mag@kn*6pt,0) -- cycle; %上の三角形
  \foreach \i in{1,2,...,#1}{
    \VDNT@currentXPos\z@

```

```

\global\VDNT@currentYPos=\dimexpr\VDNT@Yinterval*\i\relax
\draw[#2,line width=\noteLineWidth@kn] (0,\VDNT@currentYPos) -- (\linewidth,\VDNT@currentYPos);
\foreach \k in{0,1,...,\VDNT@dotsNum}{
  \VDNT@currentXPos=\dimexpr\VDNT@Xinterval*\k\relax
  \fill[#2] (\VDNT@currentXPos,\VDNT@currentYPos) circle [radius=\dotsRadius@kn];
}
}
\fill[#2] (\VDNT@Xinterval*\VDNT@dotsNum/2,\VDNT@currentYPos-\@mag@kn*4pt) -- ++(\@mag@kn*3pt,\@mag@kn*4pt) -- ++(-\@mag@kn*6pt,0) -- cycle; %下の三角形
\end{tikzpicture}%
\egroup
\par
}

```

```

\NewDocumentCommand{\masumefill}{ O{white!70!black} }{\par\bgroup
  \parindent\z@
  %%野線間隔の算出
  \@tempcnta\linewidth
  \@tempcntb\noteLineDistance@kn
  \FPeval\VDNT@dotsNum{round(round((\the)\@tempcnta/(\the)\@tempcntb)/2:0)*2:0)}%
  \VDNT@Xinterval\dimexpr(\linewidth)/\VDNT@dotsNum\relax
  \VDNT@Yinterval\VDNT@Xinterval
  %%上端の座標取得
  \zsaveposy{\VDNT@pkgname.\the\VDNT@unique.TopPos}%
  %%下端の座標取得
  \leavevmode\vfill\leavevmode
  \zsaveposy{\VDNT@pkgname.\the\VDNT@unique.BottomPos}%
  %%ノート野線描画幅の決定
  \VDNT@notegoal=\dimexpr
    \zposy{\VDNT@pkgname.\the\VDNT@unique.TopPos}sp
    -\zposy{\VDNT@pkgname.\the\VDNT@unique.BottomPos}sp
  \relax
  %%ノート野線描画
  \noindent\smash{%
    \begin{tikzpicture}[xscale=\VDNT@xscaler]
      \VDNT@currentYPos\z@
      \fill[#1] (\VDNT@Xinterval*\VDNT@dotsNum/2,\VDNT@currentYPos+\@mag@kn*4pt) -- ++(\@mag@kn*3pt,-\@mag@kn*4pt) -- ++(-\@mag@kn*6pt,0) -- cycle;
      \@whiledim\VDNT@currentYPos<\VDNT@notegoal\do{
        \VDNT@currentXPos\z@
        \draw[#1,line width=\noteLineWidth@kn] (0,\VDNT@currentYPos) -- (\linewidth,\VDNT@currentYPos);
        \foreach \k in{0,1,...,\VDNT@dotsNum}{%
          \VDNT@currentXPos=\dimexpr\VDNT@Xinterval*\k\relax
          \draw[#1,line width=\noteLineWidth@kn]
            (\VDNT@currentXPos,0) -- (\VDNT@currentXPos,\VDNT@currentYPos);
          \fill[#1] (\VDNT@currentXPos,\VDNT@currentYPos) circle [radius=\dotsRadius@kn];
        }
      }
    }
  }

```

```

\advance\VDNT@currentYPos\VDNT@Yinterval\relax
}
\fill[#1] (\VDNT@Xinterval*\VDNT@dotsNum/2,\VDNT@currentYPos-\VDNT@Yinterval-\@mag@kn*4
pt) -- ++(\@mag@kn*3pt,\@mag@kn*4pt) -- ++(-\@mag@kn*6pt,0) -- cycle;
\end{tikzpicture}%
}%
\egroup
%%座標管理用カウンタのインクリメント
\global\advance\VDNT@unique\@ne
\par
}

\NewDocumentCommand{\masume}{ m O{white!70!black} }{\par\bgroup
%%野線間隔の算出
\@tempcnta\linewidth
\@tempcntb\noteLineDistance@kn
\FPeval\VDNT@dotsNum{round(round((\the)\@tempcnta/(\the)\@tempcntb)/2:0)*2:0)}%
\VDNT@Xinterval\dimexpr\linewidth/\VDNT@dotsNum\relax
\VDNT@Yinterval\VDNT@Xinterval
%%ノート野線描画
\noindent
\begin{tikzpicture}[xscale=\VDNT@xscaler]
\VDNT@currentYPos\z@
\fill[#2] (\VDNT@Xinterval*\VDNT@dotsNum/2,\VDNT@currentYPos+\VDNT@Yinterval+\@mag@kn*4
pt) -- ++(\@mag@kn*3pt,-\@mag@kn*4pt) -- ++(-\@mag@kn*6pt,0) -- cycle; %上の三角形
\foreach \i in{1,2,...,#1}{
\VDNT@currentXPos\z@
\global\VDNT@currentYPos=\dimexpr\VDNT@Yinterval*\i\relax
\draw[#2,line width=\noteLineWidth@kn] (0,\VDNT@currentYPos) -- (\linewidth,\
VDNT@currentYPos);
\foreach \k in{0,1,...,\VDNT@dotsNum}{
\VDNT@currentXPos=\dimexpr\VDNT@Xinterval*\k\relax
\draw[#2,line width=\noteLineWidth@kn] (\VDNT@currentXPos,\VDNT@Yinterval) -- (\
VDNT@currentXPos,\VDNT@Yinterval*#1);
\fill[#2] (\VDNT@currentXPos,\VDNT@currentYPos) circle [radius=\dotsRadius@kn];
}
}
\fill[#2] (\VDNT@Xinterval*\VDNT@dotsNum/2,\VDNT@currentYPos-\@mag@kn*4pt) -- ++(\
@mag@kn*3pt,\@mag@kn*4pt) -- ++(-\@mag@kn*6pt,0) -- cycle; %下の三角形
\end{tikzpicture}%
\egroup
\par
}

\endinput

```