

Template

Very short manual of how to use L^AT_EX

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1 Installation

In order to install Latex, we need to do the following steps:

1. Installation of MiKTeX: click [MiKTeX](#) and install it completely.
2. Installation of WinEdt from [WinEdt](#) website. But this is not a free distribution. For free distribution [TeXniCenter](#) is recommended.

2 Manual

Here is a short description of how to use L^AT_EX. For more information use [L^AT_EX manual](#) or just goggle it.

You only need to work in .tex file for your text and .bib file for your bibliography. In .tex file we two main part: preamble and main body of our text.

In preamble, the settings and libraries are defined. The preamble is started with `\documentclass` which we have to use it. We can use different package with `\usepackage` following with the name of the package. For example we use package "hyperref" for making hyper link, "color" for having color, "chicago" or "natbib" for the library. ¹.

The main text comes between `\begin{document}` and `\end{document}`. Title, date and the name of author are designed in preamble. Then `\maketitle` make them in the pdf file. We can make a latex file just by

```
\documentclass[10pt]{article}
\begin{document}
  In this paper ...
\end{document}
```

In order to run your tex file you need to press the button with the red rectangle.

¹I also explain the usage of each package inside % which is the comment



Figure 1: Run Icon

If you have figure with ps format, first press the red rectangle and then the yellow one.



Figure 2: Run Icon in the case of using ps file

With `\section{}`, `\subsection{}`, or `\subsubsection{}` we can make section, subsection, and subsubsection respectively.

Every \LaTeX command started with `\`. This is a reason why I use verbatim to appear them in the text.

For figures and tables, look at the tex file. To see how I use them. you can use table instead of longtable. But I recommend using longtable especially if you have the following table. The following example is taken from the [link](#):

Table 1: Feasible triples for highly variable Grid, MLMMH.

Time (s)	Triple chosen	Other feasible triples
0	(1, 11, 13725)	(1, 12, 10980), (1, 13, 8235), (2, 2, 0), (3, 1, 0)
2745	(1, 12, 10980)	(1, 13, 8235), (2, 2, 0), (2, 3, 0), (3, 1, 0)
5490	(1, 12, 13725)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
8235	(1, 12, 16470)	(1, 13, 13725), (2, 2, 2745), (2, 3, 0), (3, 1, 0)
10980	(1, 12, 16470)	(1, 13, 13725), (2, 2, 2745), (2, 3, 0), (3, 1, 0)
13725	(1, 12, 16470)	(1, 13, 13725), (2, 2, 2745), (2, 3, 0), (3, 1, 0)
16470	(1, 13, 16470)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
19215	(1, 12, 16470)	(1, 13, 13725), (2, 2, 2745), (2, 3, 0), (3, 1, 0)
21960	(1, 12, 16470)	(1, 13, 13725), (2, 2, 2745), (2, 3, 0), (3, 1, 0)
24705	(1, 12, 16470)	(1, 13, 13725), (2, 2, 2745), (2, 3, 0), (3, 1, 0)
27450	(1, 12, 16470)	(1, 13, 13725), (2, 2, 2745), (2, 3, 0), (3, 1, 0)
30195	(2, 2, 2745)	(2, 3, 0), (3, 1, 0)
32940	(1, 13, 16470)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
35685	(1, 13, 13725)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
38430	(1, 13, 10980)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
41175	(1, 12, 13725)	(1, 13, 10980), (2, 2, 2745), (2, 3, 0), (3, 1, 0)
43920	(1, 13, 10980)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)

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Table 1 – continued from previous page

Time (s)	Triple chosen	Other feasible triples
46665	(2, 2, 2745)	(2, 3, 0), (3, 1, 0)
49410	(2, 2, 2745)	(2, 3, 0), (3, 1, 0)
52155	(1, 12, 16470)	(1, 13, 13725), (2, 2, 2745), (2, 3, 0), (3, 1, 0)
54900	(1, 13, 13725)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
57645	(1, 13, 13725)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
60390	(1, 12, 13725)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
63135	(1, 13, 16470)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
65880	(1, 13, 16470)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
68625	(2, 2, 2745)	(2, 3, 0), (3, 1, 0)
71370	(1, 13, 13725)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
74115	(1, 12, 13725)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
76860	(1, 13, 13725)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
79605	(1, 13, 13725)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
82350	(1, 12, 13725)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
85095	(1, 12, 13725)	(1, 13, 10980), (2, 2, 2745), (2, 3, 0), (3, 1, 0)
87840	(1, 13, 16470)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
90585	(1, 13, 16470)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
93330	(1, 13, 13725)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
96075	(1, 13, 16470)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
98820	(1, 13, 16470)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
101565	(1, 13, 13725)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
104310	(1, 13, 16470)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
107055	(1, 13, 13725)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
109800	(1, 13, 13725)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
112545	(1, 12, 16470)	(1, 13, 13725), (2, 2, 2745), (2, 3, 0), (3, 1, 0)
115290	(1, 13, 16470)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
118035	(1, 13, 13725)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
120780	(1, 13, 16470)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
123525	(1, 13, 13725)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
126270	(1, 12, 16470)	(1, 13, 13725), (2, 2, 2745), (2, 3, 0), (3, 1, 0)
129015	(2, 2, 2745)	(2, 3, 0), (3, 1, 0)
131760	(2, 2, 2745)	(2, 3, 0), (3, 1, 0)
134505	(1, 13, 16470)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
137250	(1, 13, 13725)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
139995	(2, 2, 2745)	(2, 3, 0), (3, 1, 0)
142740	(2, 2, 2745)	(2, 3, 0), (3, 1, 0)
145485	(1, 12, 16470)	(1, 13, 13725), (2, 2, 2745), (2, 3, 0), (3, 1, 0)
148230	(2, 2, 2745)	(2, 3, 0), (3, 1, 0)
150975	(1, 13, 16470)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
153720	(1, 12, 13725)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
156465	(1, 13, 13725)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
159210	(1, 13, 13725)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)
161955	(1, 13, 16470)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)

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Table 1 – continued from previous page

Time (s)	Triple chosen	Other feasible triples
164700	(1, 13, 13725)	(2, 2, 2745), (2, 3, 0), (3, 1, 0)

We need to use label command for cross referencing of sections, tables, figure and formulas ². For example in the above-mentioned table I used `\label{tab:other Questions}`. Then just by calling them with `\ref` command e.g. Table ??, they are appeared in the text.

The cross referencing of bibliographies are different. `\cite` is used for referring them. For example (Lucas and Kanade 1981) and (Coifman, Beymer, McLauchlan, and Malik 1998). I have just copied them from my bibliography Tracking.bib file.

For making bibliography file you need to do this process:

- make a file and save it with .bib extension. You can open my Tracking.bib file and look how I make this file. It is very easy just use Insert/BibTeXitems from menu. You can also find the bib format of your article in internet just by goggling it.
- in the main .tex file define your bibliography style which is one of the predefined libraries such as chicago or natbib (`\bibliographystyle{chicago}` or `\bibliographystyle{natbib}`). But before you need to call the package with `usepackage` in the preamble part e.g. `\usepackage{chicago}`.
- call your .bib file or files by `\bibliography{name1,name2}` without using .bib extension.
- for citing them use `\cite{name}` with the name that you use in the beginning of each article and in the place you want to be appeared in the text.

3 Web sites

The following web sites are good references for latex commands:

1. <http://www.maths.manchester.ac.uk/~kd/latextut/pdfbyex.htm> nice tutorial with example
2. <http://www.ace.uwaterloo.ca/~liho/homepage/latex.html>
3. http://www.artofproblemsolving.com/LaTeX/AoPS_L_BasicMath.php#displaystyle
4. <http://computing.ee.ethz.ch/.soft/latex/green/ltx-2.html> for L^AT_EX commands

²look at typesetting mathematical formulae in not to short reference which I mentioned in the beginning

5. <http://statweb.calpoly.edu/jdoi/web/reference/latex.html>
6. http://latex.mschoeder.net/index_en.phpforitemization
7. <http://www-h.eng.cam.ac.uk/help/tpl/textprocessing/latex2html/node12.html> for hyperlink
8. <http://www.mackichan.com/index.html?techtalk/488.htm~mainFrame>
9. <http://www.astro.rug.nl/~kuijken/latex.html> nice link for the length setting `\setlength`
10. <http://web.engr.oregonstate.edu/~kaj/ltxtips.html> tips for figure
11. http://perso.wanadoo.fr/eric.chopin/latex/latex_subset.htm tips for spacing
12. <http://www.mackichan.com/index.html?techtalk/472.htm~mainFrame> for bibliography
13. <http://computing.ee.ethz.ch/.soft/latex/green/ltx-164.html> for special character in latex such as
14. <http://computing.ee.ethz.ch/.soft/latex/local/> for color
15. <http://tex.loria.fr/general/latex2e.html> good for commands
16. <http://web.engr.oregonstate.edu/~kaj/ltxtips.html> about figure setting
17. <http://tex.loria.fr/general/latex2e.html#SEC47> for coordinate setting of picture - also in the results of this paper
18. <http://www.eng.cam.ac.uk/help/tpl/textprocessing/squeeze.html> changing length: page layout, paragraph,...
19. <http://www.sscnet.ucla.edu/classes/econta/SciWord.html> for length setting
20. <http://users.sdsc.edu/~ssmallen/latex/index.shtml>

4 Insert External pdf Pages into your document

You only need to do two steps: use package `pdfpages` by `\usepackage{pdfpages}` command in preamble and then call the pages from a pdf file you are interested to be appeared in you tex file by following command:

```
\includepdf [pages={2,5,8-9}]{3DMonitorPlanar.pdf}.
```

For more information look at [pdfpages package](#).

Usage Notice

- ➔ Warning To prevent the risk of fire or shock hazards, do not expose this product to rain or moisture.
- ➔ Warning Do not open or disassemble the product as this may cause electric shock.

Follow all warnings, precautions, and maintenance as recommended in this user's guide to maximize the life and performance of your unit.

Do

- Turn off the monitors before cleaning.
- Use only a dry soft cloth or cleanroom wipe when cleaning the LCD panel surface or the half-mirror.
- Use a soft cloth moistened with water and/or mild detergent to clean the display housing and stand.
- Use only safety-approved AC/DC power adapters of high quality.
- Disconnect the power plug from the AC outlet if the product is not used for a long period of time.

Don't

- Do not touch the LCD panel or half-mirror surfaces with sharp or hard objects.
- Do not use abrasive cleaners, waxes, or solvents for your cleaning.
- Do not operate the product under the following conditions:
 - Extremely hot, cold, or humid environment
 - Areas susceptible to excessive dust and dirt
 - Near any appliance generating a strong magnetic field
 - In direct sunlight

Stereoscopic Viewing

We live in a three-dimensional world. The human visual system can process the slightly different views of the world seen by our two eyes and translate this into the perception of depth. In the last two centuries much effort has been devoted to the reproduction of depth perception, primarily in photography and more recently in computer graphic images. Stereoscopic 3D viewing can help a viewer make faster, more accurate, and more enjoyable interpretations of imagery. The SD1710 StereoMirror™ monitor creates an unprecedented level of stereo 3D viewing quality and viewer comfort. (See Figure 1.)

Stereo viewing is useful for the following applications:

- Photogrammetry and remote sensing
- Geospatial image analysis
- Geophysical modeling
- Molecular modeling
- Computer games
- Oil and gas exploration
- Architecture and mechanical design
- Stereo photography or videography
- Medical imaging (not yet as FDA 510k approved)
- Surgical planning
- Teaching of anatomy
- Simulation
- Complex data analysis



Figure 1. The StereoMirror monitor.

→ **Warning** For some individuals, prolonged use of any stereoscopic monitor may cause discomfort.

Getting Started

Assemble the unit

1. Remove the large black base plate with attached mounting bracket from the shipping box and place it on a table or workbench. Unscrew the large knob from the base plate mount. (See Figure 4.)
2. Remove the bottom LCD panel with attached mounting post from the shipping case and install the post in the base plate mounting bracket. Make sure that the post is fully seated against the base plate. Tighten the large knob to secure the post to the base plate.
3. Remove the top LCD panel from the shipping case and install the curved slotted post on the support bar between the two posts on the back of the bottom LCD panel. Make sure the slot is fully seated in the bottom post. Tighten the plastic handle (about ½ turn clockwise). (See Figure 5.)
4. Carefully remove the glass mirror from the shipping case. With the StereoMirror™ logo oriented to the lower right, insert the pins located on either side of the mirror frame into the corresponding slots on the mirror support arms. The pins should rest in the fully forward position of the mounting arm slots. The monitor is now ready to attach to the computer. (See Figure 6.)

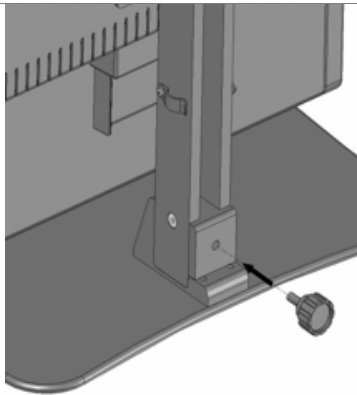


Figure 4. Knob connecting the base plate and the mounting bracket.

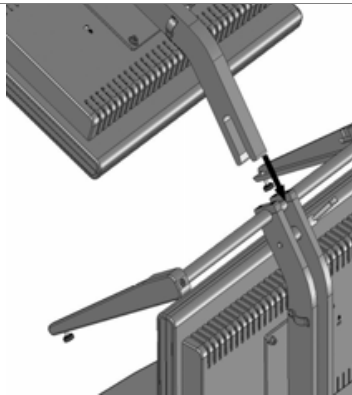


Figure 5. The Upper monitor mounting arm slides into the lower mount assembly.

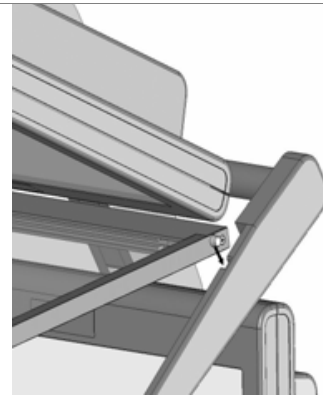


Figure 6. Glass mirror pins on each side fit into the mirror support arms.

Select a graphics card

The SD1710 unit requires an appropriate graphics card to drive the two monitors with a DVI signal. For professional applications that use OpenGL stereo support, the graphics card should support OpenGL stereo as well. Currently, Planar can recommend two graphics card families for professional applications. The Matrox® Parhelia™ line and the nVidia® Quadro™ FX line

have been tested and are compatible. For some less-demanding applications, it may be acceptable to use a less expensive, dual-DVI output graphics card.

Install the mirror-flip PCI card

Because the viewer will see a reflection of the top monitor, it is required that this image be flipped on the horizontal axis. A mirror-flip PCI card is included with the SD1710 unit. Plug this card into a free PCI slot in your computer. There are no drivers to load with the mirror-flip PCI card.

- **Warning** Proper ESD (electro static discharge) handling precautions should be exercised when installing the mirror-flip PCI card. Consult your computer's manual regarding the correct installation procedure for graphics cards.



Figure 7. Mirror-flip PCI card installed.

1. Remove the blank bracket from an available PCI slot.
2. Insert the mirror-flip PCI card into the slot, align the connector pins, and press the board down until it is firmly seated. (See Figure 7.)
3. Secure the mounting bracket.

Connect the cables

The SD1710 unit comes with two 6-foot DVI cables and one 14-inch DVI cable.

1. Take one of the 6-foot DVI cables and plug one end into the primary port of your dual-channel DVI graphics card (GC). Plug the other end into the bottom monitor of your SD1710 unit.
2. Plug one end of the 14-inch DVI cable into the secondary output of the dual-channel graphics card. (See Figure 8.) Plug the other end into the input port (labeled "IN") of the mirror-flip PCI card.



Figure 8. Short DVI cable installed.

References

- Coifman, B., D. Beymer, P. McLauchlan, and J. Malik (1998). A real-time computer vision system for vehicle tracking and traffic surveillance. Proc. of Transportation Research: Part C 6(4), 271–288. [Reference](#).
- Lucas, B. D. and T. Kanade (1981). An iterative image registration technique with an application to stereo vision. Proc. of the 7th International Joint Conference on Artificial Intelligence, Vancouver, 674–679.