

# The L<sup>A</sup>T<sub>E</sub>X symbol fonts for use with L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub>.<sup>\*</sup>

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## 1 Introduction

This file defines the package `latexsym` which makes the few additional characters available that come from the `lasy` fonts (L<sup>A</sup>T<sub>E</sub>X's symbol fonts). These fonts are not automatically included in the NFSS2/L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> since they take up important space and aren't necessary if one makes use of the packages `amsfonts` or `amssymb`.

The commands defined by the `latexsym` package are:

```
\mho \Join \Box \Diamond \leadsto ~\rightharpoonup
\sqssubset \sqsupset \lhd \unlhd \rhd \unrhd
```

## 2 The DOCSTRIP modules

The following modules are used in the implementation to direct DOCSTRIP in generating the external files:

<code>driver</code>	produce a documentation driver file
<code>package</code>	produce a package file
<code>fd</code>	produce a font definition file

## 3 The Implementation

The individual files generated from this code are identified at the very top of this file by a couple of lines looking like this:

```
%<fd>\ProvidesFile{Ulasym.fd}
%<-driver> [???/??/?? v2.2?]
%<package> Standard LaTeX package (lasy symbols)]
%<fd> LaTeX symbol font definitions]
```

```
1 \package
```

`\symlasy` It is possible to detect whether or not the L<sup>A</sup>T<sub>E</sub>X symbols are already defined by checking for the math group number with the name `\symlasy`.

In that case we exit but write a message to the transcript file.

```
2 \ifx\symlasy\undefined \else
3 \wlog{Package latexsym: nothing to set up^^J}%
4 \endinput \fi
```

Otherwise we define the new symbol font.

```
5 \DeclareSymbolFont{lasy}{U}{lasy}{m}{n}
6 \SetSymbolFont{lasy}{bold}{U}{lasy}{b}{n}
```

---

<sup>\*</sup>This file has version number v2.2e, dated 1998/08/17.

Because the lasy symbols are made an error in the format we have to undefine them before we can set them anew with `\DeclareMathSymbol`.

```

7 \let\mho\undefined \let\sqsupset\undefined
8 \let\Join\undefined \let\lhd\undefined
9 \let\Box\undefined \let\unlhd\undefined
10 \let\Diamond\undefined \let\rhd\undefined
11 \let\leadsto\undefined \let\unrhd\undefined
12 \let\sqsubset\undefined

13 \DeclareMathSymbol\mho {\mathord}{lasy}{"30}
14 \DeclareMathSymbol\Join {\mathrel}{lasy}{"31}
15 \DeclareMathSymbol\Box {\mathord}{lasy}{"32}
16 \DeclareMathSymbol\Diamond {\mathord}{lasy}{"33}
17 \DeclareMathSymbol\leadsto {\mathrel}{lasy}{"3B}
18 \DeclareMathSymbol\sqssubset{\mathrel}{lasy}{"3C}
19 \DeclareMathSymbol\sqsupset{\mathrel}{lasy}{"3D}
20 \DeclareMathSymbol\lhd {\mathbin}{lasy}{"01}
21 \DeclareMathSymbol\unlhd {\mathbin}{lasy}{"02}
22 \DeclareMathSymbol\rhd {\mathbin}{lasy}{"03}
23 \DeclareMathSymbol\unrhd {\mathbin}{lasy}{"04}

```

To save some space we can remove the definition of `\not@base` since it isn't any longer needed. (We use `\undefined` so that gives an error and not a recursive definition if it is still used somewhere.)

```

24 \let\not@base\undefined
25 \endpackage

```

### 3.1 L<sup>A</sup>T<sub>E</sub>X symbols fonts

The rest of this file defines the the font shape declarations that have to go into the corresponding `.fd` file.

```

26 \*fd
27 \DeclareFontFamily{U}{lasy}{}
28 \DeclareFontShape{U}{lasy}{m}{n}{ <5> <6> <7> <8> <9> gen * lasy
29 <10> <10.95> <12> <14.4> <17.28> <20.74> <24.88> lasy10 }{}

```

Since there are no bold lasy symbols below 10pt we silently substitute them by the medium ones to avoid terminal warnings if `\boldmath` is selected.

```

30 \DeclareFontShape{U}{lasy}{b}{n}{ <-10> ssub * lasy/m/n
31 <10> <10.95> <12> <14.4> <17.28> <20.74> <24.88> lasyb10 }{}
32 \endfd

```

The next line goes into all files and in addition prevents DOCSTRIP from adding any further code from the main source file (such as a character table).

```

33 \endinput

```