

The **amsxtra** package

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This file is maintained by the L^AT_EX Project team.
Bug reports can be opened (category **amslatex**) at
<https://latex-project.org/bugs/>.

1 Introduction

The **amsxtra** package contains a few rarely used commands that were present in version 1.1 of the **amstex** package: `\fracwithdelims`, `accentedsymbol`, `\sphat`, `\spcheck`, `\sptilde`, `\spdot`, `\spddot`, `\spdddot`, `\spbreve`. If any of these commands were used in existing documents, the **amsxtra** package provides a way to get them. But for 99% of documents using the **amstex** package these commands are just wasted overhead.

`\ProvidesPackage{amsxtra}[1999/11/15 v1.2c AMS extra commands]`

We need to ensure that either the **amstex** package or the **amsmath** package is loaded. This means we need something a little more complicated than `\RequirePackage`.

```
\@ifpackageloaded{amstex}{}{%
  \RequirePackage{amsmath}[1996/10/01 v1.2.]}

Superscripted accent characters.

\def\sphat{\mathchoice{}{}{%
  {\smash{\hbox{\lower4\ex@\hbox{$\m@th\widehat{\null}$}}}}}{%
  {\smash{\hbox{\lower3\ex@\hbox{$\m@th\hat{\null}$}}}}}}{%
  \def\spcheck{\^\vee}
  \def\sptilde{\^\sim}
  \def\spdot{\^\raise\ex@\hbox{\normalfont .}}
  \def\spddot{\^\raise\ex@\hbox{\normalfont ..}}
  \def\spdddot{\^\raise\ex@\hbox{\normalfont ...}}
  \def\spbreve{\^\!\smash[b]{\hbox{\lower4\ex@\hbox{\u{}}}}}}
```

The `\fracwithdelims` command is skipped if the base package is **amsmath**; it is only needed if the base package is **amstex**.

```
\@ifpackageloaded{amstex}{}{%
  \def\fracwithdelims#1#2{\new@ifnextchar[\{\fracwithdelims@#1#2]{%
    \fracwithdelims@#1#2[\empty]}}}
```

```
\def\fracwithdelims@#1#2[#3]#4#5{\relax
  \ifx\@empty#3{#4\overwithdelims#1#2#5}\else
    {#4\abovewithdelims#1#2#3\relax#5}\fi}
}{}
```

Perhaps `\accentsymbol` should use `\newsavebox`, but I don't know of any compelling reason at the moment.[mjd,5-Sep-1994] `\accentsymbol` can only produce a single size of the given symbol, so you'd need two different versions for main size and subscript size.

```
\def\accentsymbol#1#2{%
  \expandafter\newbox
  \csname\expandafter\@gobble\string#1\@box\endcsname
  \expandafter\setbox
  \csname\expandafter\@gobble\string#1\@box\endcsname
  \hbox{$\m@th#2$}%
  \newcommand{#1}{%
    \expandafter\copy
    \csname\expandafter\@gobble\string#1\@box\endcsname{}%
  }
}
```

Change the definition of `\~` to automatically remove a preceding space as well as a following space, if present.

```
\def~{\nobreakspace}
\DeclareRobustCommand{\nobreakspace}{\unskip\nobreak\ \ignorespaces}
```

The usual `\endinput` to ensure that random garbage at the end of the file doesn't get copied by `docstrip`.

```
\endinput
```