

# Using the Sectioning Command Code of the Standard Classes

Markus Kohm

Version 2025-09-11 v0.10

A long time ago **KOMA-Script** was more or less just a collection of replacements for the three standard classes `article`, `book` and `report`. Replacing a standard class with a **KOMA-Script** class was easy, even if users used a lot of additional packages. Over the years, the author has added many new features and user interfaces to the classes. This also led to completely different implementation of the sectioning commands. But some packages depend on an implementation similar to the standard classes.

Package `standardsectioning` implements these commands with the code of the standard classes and also deactivates parts of the **KOMA-Script** user interface, which should not be used with these changes. These are more or less all commands to configure sectioning commands. It also reverts some internal macros of **KOMA-Script**.

## Contents

<b>1</b>	<b>What are the typical reasons for using package <code>standardsectioning</code> and how to do it?</b>	<b>2</b>
<b>2</b>	<b>How to select the correct sectioning code, if the automatism fails?</b>	<b>3</b>
<b>3</b>	<b>Implementation</b>	<b>4</b>
3.1	Messages . . . . .	4
3.2	Package order . . . . .	4
3.3	<b>KOMA-Script deactivation code</b> . . . . .	5
3.4	Sectioning code of the standard classes . . . . .	6
3.5	Class dependent deactivation and implementation . . . . .	12
	<b>References</b>	<b>14</b>
	<b>Index</b>	<b>14</b>
	<b>Change History</b>	<b>15</b>

# 1 What are the typical reasons for using package `standardsectioning` and how to do it?

Sometimes replacing a standard class by a **KOMA-Script** class results in new errors, because of incompatibility of some of the packages or the already existing preamble code with these classes. In such a case, you first should try out package `scrhack` without passing any option to that package. Package `scrhack` should be the first package after loading the document class, or even be loaded *before* the document class using `\RequirePackage` instead of `\usepackage`. If this already fixes the issue, you can try to find out which of the replacements and enhancements loaded by `scrhack` solved the issue and load only these.

Only if you cannot fix the issue this kind you can try loading `standardsectioning` either also using `scrhack` with corresponding options (see [Koh23d]) or just loading `standardsectioning`.

Such errors happen, e.g., because `titlesec` makes assumptions about the definition of the sectioning commands that simply do not apply to the **KOMA-Script** classes. This leads, e.g., in the following example:

```
\documentclass{scrartcl}
\usepackage{titlesec}
\begin{document}
\section{Test Section}
Test text.
\end{document}
```

to the error message:

```
Package titlesec Error: No format for this command.
```

```
See the titlesec package documentation for explanation.
```

```
Type H <return> for immediate help.
```

```
...
```

```
1.4 \section{Test Section}
```

Several other errors can happen with combinations of `titlesec` and **KOMA-Script** classes. Best solution for this, would be to not use `titlesec` and instead use the class' interface to configure the sectioning commands, e.g., `\RedeclareSectionCommand`, `\setkomafont`, or redefining `\sectionlinesformat`. See [Koh23a] or [Koh23b] for more information. But if you do not use any of the enhanced sectioning features of the **KOMA-Script** classes, a first-aid workaround would be to load package `standardsectioning` immediately *after* the class:

```
\documentclass{scrartcl}
\usepackage{standardsectioning}
\usepackage{titlesec}
\begin{document}
\section{Test Section}
Test text.
\end{document}
```

Among other things, this redefines the sectioning commands to be compatible with the standard classes.

! **But note:** This also means, that all the enhancements to these commands are broken! You cannot use `\DeclareSectionCommand`, `\RedeclareSectionCommand`, `\DeclareNewSectionCommand`, `\ProvideSectionCommand`, `\DeclareSectionCommands`, `\RedeclareSectionCommands`, `\DeclareNewSectionCommands`, or `\ProvideSectionCommands` any longer. Other commands like `\partformat`, `\chapterformat`, `\sectionformat`, `\subsectionformat`, `\subsubsectionformat`, `\paragraphformat`, `\subparagraphformat` and many more are not used anymore.

Sometimes a wrapper classes loads a **KOMA-Script** class and than also loads a package like **titlesec**. To load `standardsections` immediately after the class, you should use the generic class hook available from L<sup>A</sup>T<sub>E</sub>X 2020-10-01:

```
\AddToHook{class/scrartcl/after}{\RequirePackage{standardsectioning}}
\AddToHook{class/scrbook/after}{\RequirePackage{standardsectioning}}
\AddToHook{class/scrreprt/after}{\RequirePackage{standardsectioning}}
```

These lines should be placed before `\documentclass`. If you are using an older L<sup>A</sup>T<sub>E</sub>X version you can use **KOMA-Script** package `scrfile` to do the same:

```
\RequirePackage{scrfile}
\AfterClass{scrartcl}{\RequirePackage{standardsectioning}}
\AfterClass{scrbook}{\RequirePackage{standardsectioning}}
\AfterClass{scrreprt}{\RequirePackage{standardsectioning}}
```

also *before* loading the class.

## 2 How to select the correct sectioning code, if the automatism fails?

By default, the package uses an automatism to decide which code of which standard class should be used. If the KOMA-Script class `scrartcl` is detected, automatically the code of `article` is used. If the KOMA-Script class `scrreprt` is detected, automatically the code of `report` is used. If the KOMA-Script class `scrbook` is detected, automatically the code of `book` is used. If none of these classes is detected, the existence of two commands is used. If `\chapter` is not defined, the code of `article` is used. If `\chapter` is defined, but `\frontmatter` is not defined, the code of `report` is used. If both `\chapter` and `\frontmatter` are defined, the code of `book` is used.

`article` (*opt.*)      Very seldom this automatism fails and the wrong code is used, which results in error messages or printing mistakes. In this case you can load package `standardsectioning` with one of the options `article`, `report` or `book` to force the usage of the sectioning code of either `article`, `report`, or `book`. This could, e.g., be needed, if you are using a class, that defines `\chapter` and `\frontmatter` but not `\if@mainmatter`. In this case, you should use

```
\usepackage[report]{standardsectioning}
```

instead of

```
\usepackage{standardsectioning}
```

because otherwise the not defined `\if@mainmatter` will result in errors, when using `\chapter`.

## 3 Implementation

### 3.1 Messages

There are some messages, that may be used several times:

```
1 \msg_new:nmmm { standardsectioning } { wrong-package-order }
2 {
3   wrong~package~order~detected.
4 }
5 {
6   You've~loaded~this~package~after~package~#1.\iow_newline:
7   But~this~cannot~work.\iow_newline:
8   Loading aborted!
9 }
10
11 \msg_new:nnn { standardsectioning } { deactivate-extended-section-commands }
12 {
13   extended~sectioning~option~handling~deactivated.
14 }
15
16 \msg_new:nnn { standardsectioning } { no-force-with-KOMA-Script-class }
17 {
18   package~option~'#1'~is~ignored~due~to~usage~of~KOMA-Script~class~\KOMAClassName.
19 }
```

### 3.2 Package order

**hyperref** must not be loaded, because otherwise deactivation of `\scr@chapter@after@hyperref@patch` would not work.

```
20 \@ifpackageloaded { hyperref }
21 {
22   \msg_critical:nnn { standardsectioning } { wrong-package-order }
23   { hyperref }
24 } { }
```

**titlesec** must not be loaded, because otherwise the re-definitions would overwrite the definitions of this package.

```
25 \@ifpackageloaded { titlesec }
26 {
27   \msg_critical:nnn { standardsectioning } { wrong-package-order }
28   { titlesec }
29 } { }
```

**sectsty** must not be loaded, because otherwise the re-definitions would overwrite the definitions of this package.

```
30 \@ifpackageloaded { sectsty }
31 {
32   \msg_critical:nmmm { standardsectioning } { wrong-package-order }
33   { sectsty }
34 } { }
```

### 3.3 KOMA-Script deactivation code

`\script_deactivation_code` (*intern*) Some deactivation code is common for all KOMA-Script classes and therefore we use an auxiliary function to not need to copy it several times.

```
35 \cs_new:Nn \@@_common_komascript_deactivation_code:
36 {
```

`\@startsection` (*intern*) KOMA-Script classes before v3.49 redefine this internal L<sup>A</sup>T<sub>E</sub>X kernel macro. In this case `\scr@saved@startsection` is defined, differs from `\@startsection` and has the definition found before redefining the original macro. We do nothing else but resetting `\@startsection` to this saved definition.

```
37 \cs_if_exist:NT \scr@saved@startsection
38 { \RenewCommandCopy \@startsection \scr@saved@startsection }
```

`\@sect` (*intern*) All these should be restored to their original definitions stored in `\scr@latex@...`

```
\@sect (intern) 39 \cs_if_exist:NT \scr@latex@sect
\@ssect (intern) 39 \cs_if_exist:NT \scr@latex@ssect
\@xsect (intern) 40 { \RenewCommandCopy \@sect \scr@latex@sect }
41 \cs_if_exist:NT \scr@latex@ssect
42 { \RenewCommandCopy \@ssect \scr@latex@ssect }
43 \cs_if_exist:NT \scr@latex@xsect
44 { \RenewCommandCopy \@xsect \scr@latex@xsect }
```

`\DeclareSectionCommand` These KOMA-Script commands do not make sense any longer after forced redefinition of `\part ... \subparagraph`. They even would not work correctly after resetting, e.g., `\DeclareNewSectionCommand \@startsection`. So best reaction is to *undefine* them.

```
\ProvideSectionCommand 45 \cs_undefine:N \DeclareSectionCommand
\DeclareSectionCommands 46 \cs_undefine:N \DeclareSectionCommands
\RedeclareSectionCommands 47 \cs_undefine:N \RedeclareSectionCommand
\DeclareNewSectionCommands 48 \cs_undefine:N \RedeclareSectionCommands
\ProvideSectionCommands 49 \cs_undefine:N \DeclareNewSectionCommand
50 \cs_undefine:N \DeclareNewSectionCommands
51 \cs_undefine:N \ProvideSectionCommand
52 \cs_undefine:N \ProvideSectionCommands
```

`\minisec` (*intern*) This also has to be undefined, because it also uses internal KOMA-Script definitions, which are deactivated.

```
53 \cs_undefine:N \minisec
```

`\scr@before@hyperref@patch` (*intern*) Now, definitions without respecting `hyperref` are used, so `hyperref` should again be able to patch them. So the hack should deactivate the patch deactivation of the KOMA-Script classes.

```
54 \cs_gset_eq:NN \scr@chapter@before@hyperref@patch \relax
55 \cs_gset_eq:NN \scr@chapter@after@hyperref@patch \relax
```

`\scr@osectarg` (*intern*) The KOMA-Script classes use this macro to store how to use the optional argument of section commands. But with the standard class definition the only possibility is to use it as running head and write it into the table of contents without any extended handling. So the only value, that makes sense is 0.

```
56 \int_if_zero:nF { \scr@osectarg }
57 {
```

```

58     \msg_warning:nn { standardsectioning }
59         { deactivate-extended-section-commands }
60     \cs_gset_eq:NN \scr@osectarg \c_zero_int
61     }

```

`\scr@activate@xsection` (*intern*) Further changing of the value has to be deactivated.

```

62     \renewcommand*{\scr@activate@xsection}[1]{%
63     \int_if_zero:nF { ##1 }
64     {
65         \msg_warning:nn { standardsectioning }
66             { deactivate-extended-section-commands }
67         \cs_gset_eq:NN \scr@osectarg \c_zero_int
68     }
69     }%

```

`\partlineswithprefixformat` These KOMA-Script commands are not used any longer. To detect errors, because of re-defining them, we undefine them.

```

\sectionlinesformat
\sectioncatchphraseformat
70     \cs_undefine:N \partlineswithprefixformat
71     \cs_undefine:N \sectionlinesformat
72     \cs_undefine:N \sectioncatchphraseformat

```

`headings` (*opt.*) The KOMA-Script option does not make sense any longer. So it is deactivated and usage will throw an error.

```

73     \RelaxFamilyKey[.\KOMAClassFileName]{KOMA}{headings}%
74     \KOMA@kav@removekey{\KOMAClassFileName}{headings}%

```

`@class@titlesec@warning` (*intern*) The warning about loading `titlesec` has to be removed, because we do not expect errors any longer.

```

75     \cs_undefine:N \scr@class@titlesec@warning
76     }

```

### 3.4 Sectioning code of the standard classes

`\part` These commands are redefined using code from `classes.dtx` 2024/02/08 v1.4n. Only `\chapter` `\newcommand` is replaced by `\def` and `#` are doubled. Depending on the class, we use different code:

```

\subsection
article_sectioning_code: (intern)
\subsubsection
@_book_sectioning_code: (intern)
\paragraph
report_sectioning_code: (intern)
\subparagraph
77 \cs_new:Nn \@@_article_sectioning_code:
78 {
79     \def\part{%
80         \if@noskipsec \leavevmode \fi
81         \par
82         \addvspace{4ex}%
83         \@afterindentfalse
84         \secdef\@part\@spart}%
85     \def\@part[##1]##2{%
86         \ifnum \c@secnumdepth >\m@ne
87         \refstepcounter{part}%

```

```

88     \addcontentsline{toc}{part}{\thepart\hspace{1em}##1}%
89     \else
90     \addcontentsline{toc}{part}{##1}%
91     \fi
92     {\parindent \z@ \raggedright
93     \interlinepenalty \@M
94     \normalfont
95     \ifnum \c@secnumdepth >\m@ne
96     \Large\bfseries \partname\nobreakspace\thepart
97     \par\nobreak
98     \fi
99     \huge \bfseries ##2%
100    \markboth{}{\par}%
101    \nobreak
102    \vskip 3ex
103    \@afterheading}%
104    \def\@spart##1{%
105    {\parindent \z@ \raggedright
106    \interlinepenalty \@M
107    \normalfont
108    \huge \bfseries ##1\par}%
109    \nobreak
110    \vskip 3ex
111    \@afterheading}%
112
113    \def\section{\@startsection {section}{1}{\z@}%
114                    {-3.5ex \@plus -1ex \@minus -.2ex}%
115                    {2.3ex \@plus .2ex}%
116                    {\normalfont\Large\bfseries}}%
117    \def\subsection{\@startsection{subsection}{2}{\z@}%
118                    {-3.25ex\@plus -1ex \@minus -.2ex}%
119                    {1.5ex \@plus .2ex}%
120                    {\normalfont\large\bfseries}}%
121    \def\subsubsection{\@startsection{subsubsection}{3}{\z@}%
122                    {-3.25ex\@plus -1ex \@minus -.2ex}%
123                    {1.5ex \@plus .2ex}%
124                    {\normalfont\normalsize\bfseries}}%
125    \def\paragraph{\@startsection{paragraph}{4}{\z@}%
126                    {3.25ex \@plus 1ex \@minus .2ex}%
127                    {-1em}%
128                    {\normalfont\normalsize\bfseries}}%
129    \def\subparagraph{\@startsection{subparagraph}{5}{\parindent}%
130                    {3.25ex \@plus 1ex \@minus .2ex}%
131                    {-1em}%
132                    {\normalfont\normalsize\bfseries}}%
133    }
134
135    \cs_new:Nn \@@_report_sectioning_code:
136    {
137    \def\part{%
138    \if@openright
139    \cleardoublepage

```

```

140     \else
141         \clearpage
142     \fi
143     \thispagestyle{plain}%
144     \if@twocolumn
145         \onecolumn
146         \@tempswatrue
147     \else
148         \@tempswafalse
149     \fi
150     \null\vfil
151     \secdef\@part\@spart}
152
153 \def\@part[##1]##2{%
154     \ifnum \c@secnumdepth >-2\relax
155         \refstepcounter{part}%
156         \addcontentsline{toc}{part}{\thepart\hspace{1em}##1}%
157     \else
158         \addcontentsline{toc}{part}{##1}%
159     \fi
160     \markboth{}{}%
161     {\centering
162     \interlinepenalty \@M
163     \normalfont
164     \ifnum \c@secnumdepth >-2\relax
165         \huge\bfseries \partname\nobreakspace\thepart
166     \par
167     \vskip 20\p@
168     \fi
169     \Huge \bfseries ##2\par}%
170 \endpart}
171 \def\@spart##1{%
172     {\centering
173     \interlinepenalty \@M
174     \normalfont
175     \Huge \bfseries ##1\par}%
176 \endpart}
177 \def\@endpart{\vfil\newpage
178     \if@twoside
179     \if@openright
180     \null
181     \thispagestyle{empty}%
182     \newpage
183     \fi
184     \fi
185     \if@tempswa
186     \twocolumn
187     \fi}
188 \def\chapter{\if@openright\cleardoublepage\else\clearpage\fi
189     \thispagestyle{plain}%
190     \global\@topnum\z@
191     \@afterindentfalse

```



```

192         \secdef\@chapter\@schapter}
193 \def\@chapter[##1]##2{\ifnum \c@secnumdepth >\m@ne
194         \refstepcounter{chapter}%
195         \typeout{\@chapapp\space\thechapter.}%
196         \addcontentsline{toc}{chapter}%
197             {\protect\numberline{\thechapter}##1}%
198         \else
199         \addcontentsline{toc}{chapter}{##1}%
200         \fi
201         \chaptermark{##1}%
202         \addtocontents{lof}{\protect\addvspace{10\p@}}%
203         \addtocontents{lot}{\protect\addvspace{10\p@}}%
204         \if@twocolumn
205             \@topnewpage[\@makechapterhead{##2}]%
206         \else
207             \@makechapterhead{##2}%
208             \@afterheading
209         \fi}
210 \def\@makechapterhead##1{%
211     \vspace*{50\p@}%
212     {\parindent \z@ \raggedright \normalfont
213     \ifnum \c@secnumdepth >\m@ne
214         \huge\bfseries \@chapapp\space \thechapter
215         \par\nobreak
216         \vskip 20\p@
217     \fi
218     \interlinepenalty\@M
219     \Huge \bfseries ##1\par\nobreak
220     \vskip 40\p@
221     }}
222 \def\@schapter##1{\if@twocolumn
223     \@topnewpage[\@makeschapterhead{##1}]%
224     \else
225     \@makeschapterhead{##1}%
226     \@afterheading
227     \fi}
228 \def\@makeschapterhead##1{%
229     \vspace*{50\p@}%
230     {\parindent \z@ \raggedright
231     \normalfont
232     \interlinepenalty\@M
233     \Huge \bfseries ##1\par\nobreak
234     \vskip 40\p@
235     }}
236 \def\section{\@startsection {section}{1}{\z@}%
237     {-3.5ex \@plus -1ex \@minus -.2ex}%
238     {2.3ex \@plus .2ex}%
239     {\normalfont\Large\bfseries}}
240 \def\subsection{\@startsection{subsection}{2}{\z@}%
241     {-3.25ex \@plus -1ex \@minus -.2ex}%
242     {1.5ex \@plus .2ex}%
243     {\normalfont\large\bfseries}}

```

```

244 \def\subsubsection{\@startsection{subsubsection}{3}{\z@}%
245         {-3.25ex\@plus -1ex \@minus -.2ex}%
246         {1.5ex \@plus .2ex}%
247         {\normalfont\normalsize\bfseries}}
248 \def\paragraph{\@startsection{paragraph}{4}{\z@}%
249         {3.25ex \@plus1ex \@minus .2ex}%
250         {-1em}%
251         {\normalfont\normalsize\bfseries}}
252 \def\subparagraph{\@startsection{subparagraph}{5}{\parindent}%
253         {3.25ex \@plus1ex \@minus .2ex}%
254         {-1em}%
255         {\normalfont\normalsize\bfseries}}
256 }
257
258 \cs_new:Nn \@@_book_sectioning_code:
259 {
260   \def\part{%
261     \if@openright
262       \cleardoublepage
263     \else
264       \clearpage
265     \fi
266     \thispagestyle{plain}%
267     \if@twocolumn
268       \onecolumn
269     \@tempswatrue
270   \else
271     \@tempswafalse
272   \fi
273   \null\vfil
274   \secdef\@part\@spart}
275
276 \def\@part [##1]##2{%
277   \ifnum \c@secnumdepth >-2\relax
278     \refstepcounter{part}%
279     \addcontentsline{toc}{part}{\thepart\hspace{1em}##1}%
280   \else
281     \addcontentsline{toc}{part}{##1}%
282   \fi
283   \markboth{}{}%
284   {\centering
285     \interlinepenalty \@M
286     \normalfont
287     \ifnum \c@secnumdepth >-2\relax
288       \huge\bfseries \partname\nobreakspace\thepart
289     \par
290     \vskip 20\p@
291   \fi
292   \Huge \bfseries ##2\par}%
293 \endpart}
294 \def\@spart##1{%
295   {\centering

```

```

296         \interlinepenalty \@M
297         \normalfont
298         \Huge \bfseries ##1\par}%
299     \@endpart}
300 \def\@endpart{\vfil\newpage
301         \if@twoside
302         \if@openright
303         \null
304         \thispagestyle{empty}%
305         \newpage
306         \fi
307         \fi
308         \if@tempwa
309         \twocolumn
310         \fi}
311 \def\chapter{\if@openright\cleardoublepage\else\clearpage\fi
312         \thispagestyle{plain}%
313         \global\@topnum\z@
314         \@afterindentfalse
315         \secdef\@chapter\@schapter}
316 \def\@chapter[##1]##2{\ifnum \c@secnumdepth >\m@ne
317         \if@mainmatter
318         \refstepcounter{chapter}%
319         \typeout{\@chapapp\space\thechapter.}%
320         \addcontentsline{toc}{chapter}%
321             {\protect\numberline{\thechapter}##1}%
322         \else
323         \addcontentsline{toc}{chapter}{##1}%
324         \fi
325         \else
326         \addcontentsline{toc}{chapter}{##1}%
327         \fi
328         \chaptermark{##1}%
329         \addtocontents{lof}{\protect\addvspace{10\p@}}%
330         \addtocontents{lot}{\protect\addvspace{10\p@}}%
331         \if@twocolumn
332         \@topnewpage[\@makechapterhead{##2}]%
333         \else
334         \@makechapterhead{##2}%
335         \@afterheading
336         \fi}
337 \def\@makechapterhead##1{%
338     \vspace*{50\p@}%
339     {\parindent \z@ \raggedright \normalfont
340     \ifnum \c@secnumdepth >\m@ne
341     \if@mainmatter
342     \huge\bfseries \@chapapp\space \thechapter
343     \par\nobreak
344     \vskip 20\p@
345     \fi
346     \fi
347     \interlinepenalty \@M

```

```

348     \Huge \bfseries ##1\par\nobreak
349     \vskip 40\p@
350   }}
351 \def\@schapter##1{\if@twocolumn
352     \topnewpage[\@makeschapterhead{##1}]%
353     \else
354     \@makeschapterhead{##1}%
355     \@afterheading
356     \fi}
357 \def\@makeschapterhead##1{%
358   \vspace*{50\p@}%
359   {\parindent \z@ \raggedright
360     \normalfont
361     \interlinepenalty\@M
362     \Huge \bfseries ##1\par\nobreak
363     \vskip 40\p@
364   }}
365 \def\section{\@startsection {section}{1}{\z@}%
366     {-3.5ex \@plus -1ex \@minus -.2ex}%
367     {2.3ex \@plus .2ex}%
368     {\normalfont\Large\bfseries}}
369 \def\subsection{\@startsection{subsection}{2}{\z@}%
370     {-3.25ex\@plus -1ex \@minus -.2ex}%
371     {1.5ex \@plus .2ex}%
372     {\normalfont\large\bfseries}}
373 \def\subsubsection{\@startsection{subsubsection}{3}{\z@}%
374     {-3.25ex\@plus -1ex \@minus -.2ex}%
375     {1.5ex \@plus .2ex}%
376     {\normalfont\normalsize\bfseries}}
377 \def\paragraph{\@startsection{paragraph}{4}{\z@}%
378     {3.25ex \@plus 1ex \@minus .2ex}%
379     {-1em}%
380     {\normalfont\normalsize\bfseries}}
381 \def\subparagraph{\@startsection{subparagraph}{5}{\parindent}%
382     {3.25ex \@plus 1ex \@minus .2ex}%
383     {-1em}%
384     {\normalfont\normalsize\bfseries}}
385 }

```

### 3.5 Class dependent deactivation and implementation

If a KOMA-Script class has been loaded we need use the common deactivation code and the article sectioning code.

`\@@_acticvation_code:` (*intern*)

```

386 \cs_new:Nn \@@_activation_code:
387 {
388   \ifclassloaded { scrartcl }
389   {
390     \@@_common_komascript_deactivation_code:
391     \@@_article_sectioning_code:
392   }

```

```
393     {
```

`\chapterlineswithprefixformat` For `scrbook` and `scrreprt` we need additional deactivation code and the book resp. report  
`\chapterlinesformat` sectioning code.

```
394     \ifclassloaded { scrbook }
395     {
396         \@@_common_komascript_deactivation_code:
397         \cs_undefine:N \chapterlineswithprefixformat
398         \cs_undefine:N \chapterlinesformat
399         \@@_book_sectioning_code:
400     }
401     {
402         \ifclassloaded { scrreprt }
403         {
404             \@@_common_komascript_deactivation_code:
405             \cs_undefine:N \chapterlineswithprefixformat
406             \cs_undefine:N \chapterlinesformat
407             \@@_report_sectioning_code:
408         }
409     }
```

For all other classes, we use a heuristic to either use the sectioning code of `article`, `book`, or `report`

```
410         \cs_if_exist:NTF \chapter
411         {
412             \cs_if_exist:cTF { frontmatter }
413             {
414                 \@@_book_sectioning_code:
415             }
416             {
417                 \@@_report_sectioning_code:
418             }
419         }
420         {
421             \@@_article_sectioning_code:
422         }
423     }
424 }
425 }
426 }
```

`book` (*opt.*) These options can be used to force the usage of one of the selection codes, but only if no `article` (*opt.*) KOMA-Script class has been used. So in the code section we first have to test for a KOMA-  
`report` (*opt.*) Script class and either throw a warning or do the redefinition of `\@@_activation_code:`.

```
427 \DeclareKeys
428 {
429     article .meta:n = { @@/internal } { force=article },
430     article .usage   = load,
431     book      .meta:n = { @@/internal } { force=book },
432     book      .usage   = load,
433     report    .meta:n = { @@/internal } { force=report },
```

```

434   report .usage = load,
435 }
436 \keys_define:nn { @@/internal }
437 {
438   force .code =
439   {
440     \cs_if_exist:NTF \KOMAClassName
441     {
442       \msg_warning:nnn { standardsectioning }
443                       { no-force-with-KOMA-Script-class }
444                       { #1 }
445     }
446     {
447       \cs_set_eq:Nc \@@_activation_code: { @@_#1_sectioning_code: }
448     }
449   }
450 }
451 \ProcessKeyOptions
452 \@@_activation_code:

```

## References

- [Koh23a] Markus Kohm. *KOMA-Script. The Guide*. June 16, 2023. URL: <http://mirrors.ctan.org/macros/latex/contrib/koma-script/scrguide-en.pdf> (visited on 07/14/2023).
- [Koh23b] Markus Kohm. *KOMA-Script. Die Anleitung*. June 16, 2023. URL: <http://mirrors.ctan.org/macros/latex/contrib/koma-script/scrguide-de.pdf> (visited on 07/04/2023).
- [Koh23c] Markus Kohm. *KOMA-Script — A bundle of versatile classes and packages*. Version 3.41. The KOMA-Script bundle provides replacements for the `article`, `report`, and `book` classes with emphasis on typography and versatility. There is also a letter class. July 7, 2023. URL: <https://ctan.org/pkg/koma-script> (visited on 07/14/2023).
- [Koh23d] Markus Kohm. *Emulating Former KOMA-Script Package `scrhack`*. Version 3.42. July 26, 2023. URL: <https://mirrors.ctan.org/macros/latex/contrib/scrhack/scrhack.pdf> (visited on 07/26/2023).

## Index

Numbers written in *italic* refer to the page where the corresponding entry is described; numbers underlined refer to the code line of the definition; numbers in *roman* refer to the code lines where the entry is used.

A	C
<code>article</code> ( <i>opt.</i> ) . . . . . <a href="#">3</a> , <a href="#">427</a>	<code>\chapter</code> . . . . . <a href="#">77</a>
B	<code>\chapterlinesformat</code> . . . . . <a href="#">394</a>
<code>book</code> ( <i>opt.</i> ) . . . . . <a href="#">3</a> , <a href="#">427</a>	<code>\chapterlineswithprefixformat</code> . . . . . <a href="#">394</a>

Commands:			
<code>\chapter</code>	77	Packages:	
<code>\chapterlinesformat</code>	394	<code>titlesec</code>	2
<code>\chapterlineswithprefixformat</code>	394	<code>\paragraph</code>	77
<code>\DeclareNewSectionCommand</code>	45	<code>\part</code>	77
<code>\DeclareNewSectionCommands</code>	45	<code>\partlineswithprefixformat</code>	70
<code>\DeclareSectionCommand</code>	45	<code>\ProvideSectionCommand</code>	45
<code>\DeclareSectionCommands</code>	45	<code>\ProvideSectionCommands</code>	45
<code>\paragraph</code>	77		
<code>\part</code>	77	<b>R</b>	
<code>\partlineswithprefixformat</code>	70	<code>\RedeclareSectionCommand</code>	45
<code>\ProvideSectionCommand</code>	45	<code>\RedeclareSectionCommands</code>	45
<code>\ProvideSectionCommands</code>	45	<code>report (opt.)</code>	3, 427
<code>\RedeclareSectionCommand</code>	45		
<code>\RedeclareSectionCommands</code>	45	<b>S</b>	
<code>\section</code>	77	<code>\section</code>	77
<code>\sectioncatchphraseformat</code>	70	<code>\sectioncatchphraseformat</code>	70
<code>\sectionlinesformat</code>	70	<code>\sectionlinesformat</code>	70
<code>\subparagraph</code>	77	<code>\subparagraph</code>	77
<code>\subsection</code>	77	<code>\subsection</code>	77
<code>\subsubsection</code>	77	<code>\subsubsection</code>	77
<b>D</b>		<b>T</b>	
<code>\DeclareNewSectionCommand</code>	45	TeX macros (internal):	
<code>\DeclareNewSectionCommands</code>	45	<code>\@@_activation_code:</code>	386
<code>\DeclareSectionCommand</code>	45	<code>\@@_article_sectioning_code:</code>	77
<code>\DeclareSectionCommands</code>	45	<code>\@@_book_sectioning_code:</code>	77
		<code>\@@_common_komascript_deactivation_code:</code>	35
		<code>\@@_report_sectioning_code:</code>	77
<b>H</b>		<code>\@sect</code>	39
<code>headings (opt.)</code>	73	<code>\@ssect</code>	39
		<code>\@startsection</code>	37
<b>O</b>		<code>\@xsect</code>	39
Options:		<code>\minisec</code>	53
<code>article</code>	3, 427	<code>\scr@activate@xsection</code>	62
<code>book</code>	3, 427	<code>\scr@chapter@after@hyperref@patch</code>	54
<code>headings</code>	73	<code>\scr@chapter@before@hyperref@patch</code>	54
<code>report</code>	3, 427	<code>\scr@class@titlesec@warning</code>	75
		<code>\scr@osectarg</code>	56

## Change History

v0.1 – 2023/06/01		<code>\@xsect: conditional restore</code>	5
General: start of KOMA-Script spin-off	1	v0.9 – 2024/06/06	
v0.10 – 2025-09-11		General: first release	1
<code>\@startsection: conditional restore</code>	5		