

Graphics drivers for L^AT_EX 2_ε*

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

1 Driver files

This file implements some of the currently supported drivers. If the driver you use is not in this list then a ‘.def’ file may be distributed with This graphics bundle, or may be distributed with your driver.

If not, send us some details of the driver’s `\special` syntax, and we will try to produce a suitable file.

Note that some of these files are for drivers to which we have no access, so they are untested. Please send any corrections to the latexbugs address.

2 Colour

Most of the drivers that support colour use one of three methods.

- color1: ‘dvips’ style colour specials.
- color2: ‘textures’ style colour specials.
- color3: Colour implemented via literal PostScript specials.
- color4: Colour implemented by specials that only support RGB, i.e., Red Green Blue specified as integers in the range 0–255. Other models converted to this within T_EX.

Some drivers do not use any of these modules and have their own code. Note that drivers using the ‘color3’ code can not fully support the L^AT_EX colour commands.

```
1 (*color1 | color2 | color3 | color4)
2 \def\color@arg#1{%
3   \dimen@#1\p@
4   \ifdim\dimen@<\z@\dimen@\maxdimen\fi
5   \ifdim\dimen@>\p@
6     \PackageError{color}{Argument ‘#1’ not in range [0,1]}\@ehd
7   \fi}
```

*Version v3.0l, revised 2016/06/02

Need to make sure of a trailing .0 for textures. Apparently it is OK to always add a . as 1.3. is accepted by textures. textures gray special is reversed, so just use rgb instead.

```

8 \def\color@gray#1#2{%
9   \c@lor@arg{#2}%
10  \color4 \c@lor@rgb@RGB\@tempa
11  \color1 \edef#1{gray #2}%
12  \color2 \edef#1{rgb #2. #2. #2.}%
13  \color3 \edef#1{#2 setgray}%
14  \color4 \edef#1{\@tempa\@tempa\@tempa}%
15  }
16 \def\color@cmyk#1#2{\c@lor@@cmyk#2\@@#1}
17 \def\c@lor@@cmyk#1,#2,#3,#4\@@#5{%
18   \c@lor@arg{#4}%
19  \color4 \dimen@ii#4\p@
20   \c@lor@arg{#1}%
21  \color4 \c@lor@cmyk@RGB\@tempa
22   \c@lor@arg{#2}%
23  \color4 \c@lor@cmyk@RGB\@tempb
24   \c@lor@arg{#3}%
25  \color4 \c@lor@cmyk@RGB\@tempc
26  \color1 \edef#5{cmyk #1 #2 #3 #4}%
27  \color2 \edef#5{cmyk #1. #2. #3. #4.}%
28  \color3 \edef#5{#1 #2 #3 #4 setcmykcolor}%
29  \color4 \edef#5{\@tempa\@tempb\@tempc}%
30  }

```

A 0–1 range value will have been left in \dimen@ by \c@lor@arg. The black value (0–1) will be stored in \dimen@ii. Covert to 0–255 integer, and leave in #1.

```

31 (*color4)
32 \def\c@lor@cmyk@RGB#1{%
33   \advance\dimen@-\p@
34   \advance\dimen@\dimen@ii
35   \dimen@-\@cclv\dimen@
36   \divide\dimen@\p@
37   \count@\ifdim\dimen@<\z@\z@\else\dimen@\fi
38   \edef#1{\the\count@\space}}
39 \color4
40 \def\color@rgb#1#2{\c@lor@@rgb#2\@@#1}
41 \def\c@lor@@rgb#1,#2,#3\@@#4{%
42   \c@lor@arg{#1}%
43  \color4 \c@lor@rgb@RGB\@tempa
44   \c@lor@arg{#2}%
45  \color4 \c@lor@rgb@RGB\@tempb
46   \c@lor@arg{#3}%
47  \color4 \c@lor@rgb@RGB\@tempc
48  \color1 \edef#4{rgb #1 #2 #3}%
49  \color2 \edef#4{rgb #1. #2. #3.}%
50  \color3 \edef#4{#1 #2 #3 setrgbcolor}%
51  \color4 \edef#4{\@tempa\@tempb\@tempc}%
52  }

```

A 0–1 range value will have been left in \dimen@ by \c@lor@arg. Convert to 0–255 integer, and leave in #1.

```

53 <*color4>
54 \def\color@rgb@RGB#1{%
55   \dimen@ \@ccclv\dimen@
56   \count@ \dimen@
57   \divide\count@ \p@
58   \edef#1{\the\count@\space}}
59 </color4>
60 \def\color@RGB#1#2{\color@@RGB#2\@@#1}
61 \def\color@@RGB#1,#2,#3\@@#4{%
62 <!color4> \color@RGB@rgb{#1}\@tempa
63 <!color4> \color@RGB@rgb{#2}\@tempb
64 <!color4> \color@RGB@rgb{#3}\@tempc
65 <!color4> \color@rgb\@tempa,\@tempb,\@tempc\@@#4%
66 <color4> \edef#4{#1 #2 #3}%
67   }

```

Convert 0–255 integer, #1, to 0–1 real, and leave in #2.

```

68 <!*color4>
69 \def\color@RGB@rgb#1#2{%
70   \dimen@#1\p@
71   \divide\dimen@ \@ccclv
72   \edef#2{\strip@pt\dimen@}}
73 </!color4>
74 <*color1 | color3>
75 \def\color@hsb#1#2{\color@@hsb#2\@@#1}
76 \def\color@@hsb#1,#2,#3\@@#4{%
77   \color@arg{#1}%
78   \color@arg{#2}%
79   \color@arg{#3}%
80 <color1> \edef#4{hsb #1 #2 #3}%
81 <color3> \edef#4{#1 #2 #3 sethsbcolor}%
82   }
83 </color1 | color3>
84 \def\color@named#1#2{\color@@named#2,,\@@#1}
85 \def\color@@named#1,#2,#3\@@#4{%
86   \ifundefined{col@#1}%
87     {\PackageError{color}{Undefined color ‘#1’}\@ehd}%
88 <color1&!dvipsone> {\edef#4{ #1}}%
89 <color2> {\edef#4{ #1 \if!#2!\else #2.\fi}}%
90 <color3 | dvipsone | color4> {\edef#4{\csname col@#1\endcsname}}%
91   }

```

Conversion from \special syntax to PostScript (for PSTricks).

```

92 <*color1 | color2>
93 \def\color@to@ps#1 #2\@@{\csname c@lor@ps@#1\endcsname#2 \@@}
94 </color1 | color2>
95 <*color3>
96 \def\color@to@ps#1\@@{#1}
97 </color3>
98 <*color4>
99 \def\color@to@ps#1#2 #3 #4\@@{%
100   #1#2 255 div #3 255 div #4 255 div setrgbcolor}
101 </color4>

```

```

102 <*color1>
103 \def\color@ps@#1 #2\@{\TeXDict begin #1 end}
104 \def\color@ps@rgb#1\@{\#1 setrgbcolor}
105 \def\color@ps@hsb#1\@{\#1 sethsbcolor}
106 \def\color@ps@cmymk#1\@{\#1 setcmymkcolor}
107 \def\color@ps@gray#1\@{\#1 setgray}
108 </color1>
109 <*color2>
110 \def\color@to@ps@#1 #2\@{\csname color@ps@#1\endcsname#2 \@}
111 \def\color@ps@#1 #2\@{\%
112   \expandafter\expandafter\expandafter
113     \color@to@ps@\csname col@#1\endcsname\space#2. \@{\#1}}
114 \def\color@ps@rgb#1. #2. #3. #4\@{\#1 #2 #3 setrgbcolor}
115 \def\color@ps@rgb@#1. #2. #3. #4. #5\@{\#1 #2 #3 setrgbcolor}
116 \def\color@ps@cmymk#1. #2. #3. #4. #5. #6\@{\#1 #2 #3 #4 setcmymkcolor}
117 \def\color@ps@cmymk@#1. #2. #3. #4. #5. #6\@{\#7{\%
118   #1 #2 #3 #4 (#7) findcustomcmymkcolor
119   \if!\@firstofone#5!1 \else#5 \fi setcustomcolor}
120 </color2>

121 <color1&!dvipsone>\def\current@color{ Black}
122 <color1 & dvipsone>\def\current@color{gray 0}
123 <color2>\def\current@color{rgb 0. 0. 0.}
124 <color3>\def\current@color{0 setgray}
125 <color4>\def\current@color{0 0 0}

126 <*color1>
127 \def\set@color{\%
128 (!dvipsone&!dvipdf) \special{color push \current@color
129 (dvipsone) \special{color push}\special{color \current@color
130 (dvipdf) \special{pdf: /C \current@color\space<<
131 } \aftergroup\reset@color}
132 \def\reset@color{\special{\%
133 (!dvipdf) color pop}}
134 (dvipdf) pdf: /C >> }}
135 \def\set@page@color{\special{\%
136 (!dvipdf) background \current@color}}
137 (dvipdf) pdf: /BG \current@color}}
138 \def\define@color@named#1#2{\%
139 (!dvipsone) \expandafter\let\csname col@#1\endcsname\@nnil}
140 (dvipsone) \expandafter\edef\csname col@#1\endcsname{#2}}
141 (dvips) \def\no@page@color{\special{background \string"newpath clip}}
142 </color1>
143 <*color2>
144 \def\set@color{\%
145 \special{color push}\%
146 \special{color \current@color}\%
147 \aftergroup\reset@color}
148 \def\reset@color{\special{color pop}}
149 \def\set@page@color{\color@special\sixt@@n{background \current@color}}
150 \def\define@color@named#1#2{\%
151 \AtBeginDvi{\special{color define #1 #2}}\%
152 \expandafter\edef\csname col@#1\endcsname{#2}}
153 </color2>
154 <*color3>

```

```

155 \def\set@color{%
156   \Gin@PS@raw{\current@color}\aftergroup\reset@color}
157 \def\reset@color{\Gin@PS@raw{\current@color}}
158 \color3}
159 \color4}
160 \def\set@color{%
161   \special{textcolor: \current@color}\aftergroup\reset@color}
162 \def\reset@color{\special{textcolor: \current@color}}
163 \color4}
164 \color3 | color4}
165 \def\set@page@color{%
166   \c@lor@special\sixt@@n{background color ignored: \current@color}}
167 \def\define@color@named#1#2{%
168   \expandafter\edef\csname col@#1\endcsname{#2}}
169 \color3 | color4}

170 \color1 | color2 | color3 | color4}

171 \colorfix}
172 \AtBeginDocument{%
173   \let\@ldc@l@r\color
174   \def\color{\if@inlabel\leavevmode\fi\@ldc@l@r}%
175   \let\@lduseb@x\usebox
176   \def\usebox#1{\@lduseb@x{#1}\set@color}}
177 \colorfix}

178 \dvipsnames}
179 \DefineNamedColor{named}{GreenYellow} {cmyk}{0.15,0,0.69,0}
180 \DefineNamedColor{named}{Yellow} {cmyk}{0,0,1,0}
181 \DefineNamedColor{named}{Goldenrod} {cmyk}{0,0.10,0.84,0}
182 \DefineNamedColor{named}{Dandelion} {cmyk}{0,0.29,0.84,0}
183 \DefineNamedColor{named}{Apricot} {cmyk}{0,0.32,0.52,0}
184 \DefineNamedColor{named}{Peach} {cmyk}{0,0.50,0.70,0}
185 \DefineNamedColor{named}{Melon} {cmyk}{0,0.46,0.50,0}
186 \DefineNamedColor{named}{YellowOrange} {cmyk}{0,0.42,1,0}
187 \DefineNamedColor{named}{Orange} {cmyk}{0,0.61,0.87,0}
188 \DefineNamedColor{named}{BurntOrange} {cmyk}{0,0.51,1,0}
189 \DefineNamedColor{named}{Bittersweet} {cmyk}{0,0.75,1,0.24}
190 \DefineNamedColor{named}{RedOrange} {cmyk}{0,0.77,0.87,0}
191 \DefineNamedColor{named}{Mahogany} {cmyk}{0,0.85,0.87,0.35}
192 \DefineNamedColor{named}{Maroon} {cmyk}{0,0.87,0.68,0.32}
193 \DefineNamedColor{named}{BrickRed} {cmyk}{0,0.89,0.94,0.28}
194 \DefineNamedColor{named}{Red} {cmyk}{0,1,1,0}
195 \DefineNamedColor{named}{OrangeRed} {cmyk}{0,1,0.50,0}
196 \DefineNamedColor{named}{RubineRed} {cmyk}{0,1,0.13,0}
197 \DefineNamedColor{named}{WildStrawberry} {cmyk}{0,0.96,0.39,0}
198 \DefineNamedColor{named}{Salmon} {cmyk}{0,0.53,0.38,0}
199 \DefineNamedColor{named}{CarnationPink} {cmyk}{0,0.63,0,0}
200 \DefineNamedColor{named}{Magenta} {cmyk}{0,1,0,0}
201 \DefineNamedColor{named}{VioletRed} {cmyk}{0,0.81,0,0}
202 \DefineNamedColor{named}{Rhodamine} {cmyk}{0,0.82,0,0}
203 \DefineNamedColor{named}{Mulberry} {cmyk}{0.34,0.90,0,0.02}
204 \DefineNamedColor{named}{RedViolet} {cmyk}{0.07,0.90,0,0.34}
205 \DefineNamedColor{named}{Fuchsia} {cmyk}{0.47,0.91,0,0.08}
206 \DefineNamedColor{named}{Lavender} {cmyk}{0,0.48,0,0}
207 \DefineNamedColor{named}{Thistle} {cmyk}{0.12,0.59,0,0}

```

```

208 \DefineNamedColor{named}{Orchid} {cmyk}{0.32,0.64,0,0}
209 \DefineNamedColor{named}{DarkOrchid} {cmyk}{0.40,0.80,0.20,0}
210 \DefineNamedColor{named}{Purple} {cmyk}{0.45,0.86,0,0}
211 \DefineNamedColor{named}{Plum} {cmyk}{0.50,1,0,0}
212 \DefineNamedColor{named}{Violet} {cmyk}{0.79,0.88,0,0}
213 \DefineNamedColor{named}{RoyalPurple} {cmyk}{0.75,0.90,0,0}
214 \DefineNamedColor{named}{BlueViolet} {cmyk}{0.86,0.91,0,0.04}
215 \DefineNamedColor{named}{Periwinkle} {cmyk}{0.57,0.55,0,0}
216 \DefineNamedColor{named}{CadetBlue} {cmyk}{0.62,0.57,0.23,0}
217 \DefineNamedColor{named}{CornflowerBlue} {cmyk}{0.65,0.13,0,0}
218 \DefineNamedColor{named}{MidnightBlue} {cmyk}{0.98,0.13,0,0.43}
219 \DefineNamedColor{named}{NavyBlue} {cmyk}{0.94,0.54,0,0}
220 \DefineNamedColor{named}{RoyalBlue} {cmyk}{1,0.50,0,0}
221 \DefineNamedColor{named}{Blue} {cmyk}{1,1,0,0}
222 \DefineNamedColor{named}{Cerulean} {cmyk}{0.94,0.11,0,0}
223 \DefineNamedColor{named}{Cyan} {cmyk}{1,0,0,0}
224 \DefineNamedColor{named}{ProcessBlue} {cmyk}{0.96,0,0,0}
225 \DefineNamedColor{named}{SkyBlue} {cmyk}{0.62,0,0.12,0}
226 \DefineNamedColor{named}{Turquoise} {cmyk}{0.85,0,0.20,0}
227 \DefineNamedColor{named}{TealBlue} {cmyk}{0.86,0,0.34,0.02}
228 \DefineNamedColor{named}{Aquamarine} {cmyk}{0.82,0,0.30,0}
229 \DefineNamedColor{named}{BlueGreen} {cmyk}{0.85,0,0.33,0}
230 \DefineNamedColor{named}{Emerald} {cmyk}{1,0,0.50,0}
231 \DefineNamedColor{named}{JungleGreen} {cmyk}{0.99,0,0.52,0}
232 \DefineNamedColor{named}{SeaGreen} {cmyk}{0.69,0,0.50,0}
233 \DefineNamedColor{named}{Green} {cmyk}{1,0,1,0}
234 \DefineNamedColor{named}{ForestGreen} {cmyk}{0.91,0,0.88,0.12}
235 \DefineNamedColor{named}{PineGreen} {cmyk}{0.92,0,0.59,0.25}
236 \DefineNamedColor{named}{LimeGreen} {cmyk}{0.50,0,1,0}
237 \DefineNamedColor{named}{YellowGreen} {cmyk}{0.44,0,0.74,0}
238 \DefineNamedColor{named}{SpringGreen} {cmyk}{0.26,0,0.76,0}
239 \DefineNamedColor{named}{OliveGreen} {cmyk}{0.64,0,0.95,0.40}
240 \DefineNamedColor{named}{RawSienna} {cmyk}{0,0.72,1,0.45}
241 \DefineNamedColor{named}{Sepia} {cmyk}{0,0.83,1,0.70}
242 \DefineNamedColor{named}{Brown} {cmyk}{0,0.81,1,0.60}
243 \DefineNamedColor{named}{Tan} {cmyk}{0.14,0.42,0.56,0}
244 \DefineNamedColor{named}{Gray} {cmyk}{0,0,0,0.50}
245 \DefineNamedColor{named}{Black} {cmyk}{0,0,0,1}
246 \DefineNamedColor{named}{White} {cmyk}{0,0,0,0}
247 \end{dvipsnames}

```

3 dvips

A L^AT_EX 2_ε graphics driver file for Tom Rokicki's *dvips* driver; tested with version 5.58f.

```
248 (*dvips)
```

3.1 Colour

Uses the generic ‘color1’ code.

3.2 File inclusion

```

\Gininclude@eps #1 input file (or command)
249 \def\Gininclude@eps#1{%
250 \message{<#1>}%
251 \bgroup
dvips likes to work with its own pixel resolution, so mangle the sizes slightly.
252 \def\@tempa{!}%
253 \dimen@\Gin@req@width
254 \dimen@ii.1bp%
255 \divide\dimen@\dimen@ii
256 \@tempdima\Gin@req@height
257 \divide\@tempdima\dimen@ii
258 \special{PSfile="#1"\space
259 llx=\Gin@llx\space
260 lly=\Gin@lly\space
261 urx=\Gin@urx\space
262 ury=\Gin@ury\space
263 \ifx\Gin@scalex\@tempa\else rwi=\number\dimen@\space\fi
264 \ifx\Gin@scaley\@tempa\else rhi=\number\@tempdima\space\fi
265 \ifGin@clip clip\fi}%
266 \egroup}

\Gininclude@bmp #1 input file; if zero size is requested, the graphic will come at ‘natural’ size.
267 \def\Gininclude@bmp#1{%
268 \message{<#1>}%
269 \dimen@\Gin@req@height
270 \advance\dimen@ by-\Gin@lly bp
271 \kern-\Gin@llx bp\raise\Gin@req@height\hbox{%
272 \ifdim\Gin@urx bp=\z@
273 \ifdim\Gin@ury bp=\z@
274 \special{em: graph #1}%
275 \else
276 \special{em: graph #1,\Gin@urx bp}%
277 \fi
278 \else
279 \special{em: graph #1,\Gin@urx bp,\Gin@ury bp}%
280 \fi
281 }%
282 }

\Gininclude@pict PICT/PNTG format from the Mac. Actually only currently supported by the
\Gininclude@pntg version of dvips distributed with OzTEX, and with the built in OzTEX drivers,
\oztex@include but put here anyway as it is not much code and increases portability between the
systems as now [dvips] and [oztex] share the same back end.
283 \def\oztex@include#1#2{%
284 \dimen@1bp%
285 \divide\Gin@req@width\dimen@
286 \divide\Gin@req@height\dimen@
287 \special{#1=#2\space
288 \@width=\number\Gin@req@width \space
289 \@height=\number\Gin@req@height}}

```

```

290 \def\Gininclude@pntg{\oztex@include{pntg}}
291 \def\Gininclude@pict{\oztex@include{pict}}

```

3.3 Rotation

```

292 \def\Grot@start{%
293   \special{ps: gsave currentpoint
294     currentpoint translate \Grot@angle\space neg
295     rotate neg exch neg exch translate}}
296 \def\Grot@end{\special{ps: currentpoint grestore moveto}}

```

3.4 Scaling

```

297 \def\Gscale@start{\special{ps: currentpoint currentpoint translate
298   \Gscale@x\space \Gscale@y\space scale neg exch neg exch translate}}
299 \def\Gscale@end{\special{ps: currentpoint currentpoint translate
300   1 \Gscale@x\space div 1 \Gscale@y\space div scale
301   neg exch neg exch translate}}

```

4 Literal Postscript

Raw PostScript code, no save/restore.

```

302 \def\Gin@PS@raw#1{\special{ps: #1}}

```

PostScript code, to be surrounded by save/restore by the driver. Coordinate system standard PostScript, but with origin at current (T_EX) position.

```

303 \def\Gin@PS@restored#1{\special{" #1}}

```

PostScript code to be inserted in the Header section of the final PostScript. Must be issued on the first page of a document.

```

304 \def\Gin@PS@literal@header#1{\AtBeginDvi{\special{! #1}}}

```

Name of external file, the contents of which are to be inserted in the Header section of the final PostScript. Must be issued on the first page of a document.

```

305 \def\Gin@PS@file@header#1{\AtBeginDvi{\special{header=#1}}}

```

5 Page Size

```

306 \ifGin@setpagesize
307   \AtBeginDocument{\AtBeginDvi{%
308     \begingroup
309     \ifx\stockwidth\@undefined\else
310       \paperwidth\stockwidth
311       \paperheight\stockheight
312     \fi
313     \ifdim\paperwidth>\z@
314       \ifdim\paperheight>\z@
315         \special{papersize=\the\paperwidth,\the\paperheight}%
316       \fi
317     \fi
318   \endgroup}}
319 \fi
320 (/dvips)

```


6 dvipdf

A L^AT_EX 2_ε graphics driver file for *dvipdf* driver.

321 (*dvipdf)

6.1 Colour

Uses the generic ‘color1’ code.

6.2 File inclusion

```
\Gininclude@eps #1 input file (or command)
322 \def\Gininclude@eps#1{%
323   \message{<#1>}%
324   \bgroup
dvips likes to work with its own pixel resolution, so mangle the sizes slightly.
325   \def\@tempa{!}%
326   \dimen@\Gin@req@width
327   \dimen@ii.1bp%
328   \divide\dimen@\dimen@ii
329   \@tempdima\Gin@req@height
330   \divide\@tempdima\dimen@ii
331   \special{PSfile="#1"\space
332     llx=\Gin@llx\space
333     lly=\Gin@lly\space
334     urx=\Gin@urx\space
335     ury=\Gin@ury\space
336     \ifx\Gin@scalex\@tempa\else rwi=\number\dimen@\space\fi
337     \ifx\Gin@scaley\@tempa\else rhi=\number\@tempdima\space\fi
338     \ifGin@clip clip\fi}%
339   \egroup}

\Gininclude@bmp #1 input file; if zero size is requested, the graphic will come at ‘natural’ size.
340 \def\Gininclude@bmp#1{%
341   \message{<#1>}%
342   \dimen@\Gin@req@height
343   \advance\dimen@ by-\Gin@lly bp
344   \kern-\Gin@llx bp\raise\Gin@req@height\hbox{%
345     \ifdim\Gin@urx bp=\z@
346       \ifdim\Gin@ury bp=\z@
347         \special{pdf: /GRAPH #1}%
348       \else
349         \special{pdf: /GRAPH #1 \number\Gin@req@width sp}%
350       \fi
351     \else
352       \special{pdf: /GRAPH #1 \number\Gin@req@width sp
353         \number\Gin@req@height sp}%
354     \fi}}
```

6.3 Rotation

```
355 \def\Grot@start{%
```

```

356 \special{pdf: /ROT \Grot@angle\space << }}
357 \def\Grot@end{\special{pdf: /ROT >> }}

```

6.4 Scaling

```

358 \def\Gscale@start{\special{pdf: /S \Gscale@x\space \Gscale@y\space << }}
359 \def\Gscale@end{\special{pdf: /S \space >> }}

```

7 Literal Postscript

Raw PostScript code, no save/restore.

```

360 \def\Gin@PS@raw#1{\special{ps: #1}}

```

PostScript code, to be surrounded by save/restore by the driver. Coordinate system standard PostScript, but with origin at current (T_EX) position.

```

361 \def\Gin@PS@restored#1{\special{" #1}}

```

PostScript code to be inserted in the Header section of the final PostScript. Must be issued on the first page of a document.

```

362 \def\Gin@PS@literal@header#1{\AtBeginDvi{\special{! #1}}}

```

Name of external file, the contents of which are to be inserted in the Header section of the final PostScript. Must be issued on the first page of a document.

```

363 \def\Gin@PS@file@header#1{\AtBeginDvi{\special{header=#1}}}

```

7.1 File extensions

```

364 \namedef{Gin@rule@.msp}#1{{bmp}{.bb}}{#1}}
365 \namedef{Gin@rule@.jpg}#1{{bmp}{.bb}}{#1}}
366 \namedef{Gin@rule@.bmp}#1{{bmp}{.bb}}{#1}}
367 \dvipdf

```

8 OzT_EX

A L^AT_EX 2_ε graphics driver file for OzT_EX (versions 1.42 and later), by Andrew Trevorrow.

```

368 (*oztex)

```

8.1 Graphics inclusion

```

369 \def\Gininclude@eps{\Oztex@Include{epsf}}
370 \def\Gininclude@pntg{\Oztex@Include{pntg}}
371 \def\Gininclude@pict{\Oztex@Include{pict}}
372 \def\Oztex@Include#1#2{%
373   \ifGin@clip
374     \typeout{No clipping support in OzTeX}%
375   \fi
376   \divide\Gin@req@width by 65781% convert sp to bp
377   \divide\Gin@req@height by 65781%
378   \special{#1=#2\space
379     width=\number\Gin@req@width \space
380     height=\number\Gin@req@height
381   }%
382 }

```

383 \langle /oztex \rangle

9 Textures

A L^AT_EX 2_ε graphics driver file for Blue Sky's Textures

WARNING! There is ongoing work to produce a new version of the textures support. Do not rely on anything in this file being in the next version!

384 \langle *textures \rangle

9.1 Graphics inclusion

```
385 \PackageInfo{graphics/color}
386 {This file uses the advanced color support\MessageBreak
387   available in textures1.7\MessageBreak
388   If you are using color with an earlier version\MessageBreak
389   of textures, edit graphics.ins where marked,\MessageBreak
390   and re-latex graphics.ins.\MessageBreak\MessageBreak
391   If you are using textures1.7\MessageBreak
392   you may want to delete this warning\MessageBreak
393   from textures.def.\MessageBreak\MessageBreak
394   The code for scaling/rotation and file inclusion\MessageBreak
395   in this file is still rudimentary, and does not\MessageBreak
396   use textures' full capabilities.\MessageBreak\MessageBreak
397   A new textures.def is currently being developed@gobble}

398 \def\Gininclude@eps{\Textures@Include{illustration}}
399 \def\Gininclude@pict{\Textures@Include{pictfile}}
400 \def\Textures@Include#1#2{%
401   \def\@tempa{!}%
402   \ifx\Gin@scaley\@tempa
403     \let\Gin@scaley\Gin@scalex
404   \else
405     \ifx\Gin@scalex\@tempa\let\Gin@scalex\Gin@scaley\fi
406   \fi
407   \setlength\@tempdima{\Gin@scalex pt}%
408   \setlength\@tempdimb{\Gin@scaley pt}%
409   \ifdim\@tempdima>\@tempdimb
410     \let\Gin@scalex\Gin@scaley
411   \fi
412   \ifGin@clip
413     \typeout{no clipping support in Textures}%
414   \fi
415   \@tempdimb=1000sp%
416   \setlength\@tempdima{\Gin@scalex\@tempdimb}%
417   \special{#1 #2\space scaled \number\@tempdima}%
418 }
```

9.2 Rotation

This code was written when no unprotected postscript code was allowed; it could almost certainly be rewritten now with 'rawpostscript'.

```
419 \def\Grot@start{\special{postscript
420   0 0 transform
```

```

421 grestore
422 matrix currentmatrix
423 3 1 roll
424 itransform
425 dup 3 -1 roll
426 dup 4 1 roll exch
427 translate
428 \Grot@angle\space neg rotate
429 neg exch neg exch translate
430 gsave}}
431 \def\Grot@end{\special{postscript grestore setmatrix gsave}}

```

9.3 Colour

This will only work for versions 1.6 and Version 1.7 uses ‘color2’.

```

432 <color3>\def\Gin@PS@raw#1{\special{rawpostscript #1}}
433 </textures>

```

10 dvialw

A L^AT_EX 2_ε graphics driver file for dvialw, by Nelson Beebe

```

434 <*dvialw>

```

10.1 Rotation

```

435 \def\Gin@include@eps#1{%
436   \def\@tempa{!}%
437   \ifx\Gin@scaley\@tempa
438     \let\Gin@scaley\Gin@scalex
439   \else
440     \ifx\Gin@scalex\@tempa\let\Gin@scalex\Gin@scaley\fi
441   \fi
442   \ifGin@clip
443     \typeout{no clipping support in dvialw}%
444   \fi
445   \special{language "PS",
446     literal "\Gin@scalex\space
447       \Gin@scaley\space scale",
448     position = "bottom left",
449     include "#1\space"}%
450 }
451 </dvialw>

```

11 emtex

A L^AT_EX 2_ε graphics driver file for Eberhard Mattes’ emTeX

```

452 <*emtex>

```

11.1 Graphics file inclusion

```

453 \def\Gin@include@bmp#1{%
454   \raise\Gin@req@height\hbox{\special{em:graph #1}}%

```

```

455 \typeout{WARNING: emtex does not permit graphics to be scaled}%
456 }
457 </emtex>

```

12 dvlaser/ps

A L^AT_EX 2_ε graphics driver file for Arbortext's dvlaser/ps

```

458 <(*dvlaser>

```

12.1 Graphic file inclusion

```

459 \def\Gininclude@eps#1{%
460 \ifGin@clip
461 \typeout{no clipping support in dvlaser/ps}%
462 \fi
463 \special{ps: epsfile #1\space \the\Gin@req@width}%
464 }
465 </dvlaser>

```

13 psprint

A L^AT_EX 2_ε graphics driver file for Trevorrow's psprint

```

466 <(*psprint>

```

13.1 Graphic file inclusion

```

467 \def\Gininclude@eps#1{%
468 \def\@tempa{!}%
469 \ifx\Gin@scaley\@tempa
470 \let\Gin@scaley\Gin@scalex
471 \else
472 \ifx\Gin@scalex\@tempa\let\Gin@scalex\Gin@scaley\fi
473 \fi
474 \ifGin@clip
475 \typeout{no clipping support in psprint}%
476 \fi
477 \special{#1\space
478 \Gin@scalex\space \Gin@scaley\space scale
479 \Gin@llx\space neg
480 \Gin@lly \space neg translate
481 }%
482 }
483 </psprint>

```

14 dvipsone

A L^AT_EX 2_ε graphics driver file for Y&Y's dvipsone

```

484 <(*dvipsone>

```

14.1 Graphic file inclusion

PostScript Files.

```

485 \def\Gininclude@eps#1{%
486 \message{<#1>}%
487 \bgroup
488 \def\@tempa{!}%
489 \dimen@\Gin@req@width
490 \dimen@ii.1bp%
491 \divide\dimen@\dimen@ii
492 \@tempdima\Gin@req@height
493 \divide\@tempdima\dimen@ii
494 \special{PSfile="#1"\space
495 llx=\Gin@llx\space
496 lly=\Gin@lly\space
497 urx=\Gin@urx\space
498 ury=\Gin@ury\space
499 \ifx\Gin@scalex\@tempa\else rwi=\number\dimen@\space\fi
500 \ifx\Gin@scaley\@tempa\else rhi=\number\@tempdima\space\fi
501 \ifGin@clip clip\fi}%
502 \egroup}

```

Tiff files.

```

503 \def\Gininclude@tiff#1{%
504 \message{<#1>}%
505 \special{insertimage: #1 \number\Gin@req@width\space
506 \number\Gin@req@height}}

```

Windows Metafiles.

```

507 \def\Gininclude@wmf#1{%
508 \message{<#1>}%
509 \special{insertmf: #1 0 0 \number\Gin@req@width\space
510 \number\Gin@req@height}}

```

```

511 \def\Gin@PS@raw#1{\special{ps: #1}}

```

14.2 Rotation

```

512 \def\Grot@start{%
513 \special{ps: gsave currentpoint
514 currentpoint translate \Grot@angle\space
515 rotate neg exch neg exch translate}}
516 \def\Grot@end{%
517 \special{ps: currentfont currentpoint grestore moveto setfont}}

```

14.3 Scaling

```

518 \def\Gscale@start{\special{ps: currentpoint currentpoint translate
519 \Gscale@x\space \Gscale@y\space scale neg exch neg exch translate}}
520 \def\Gscale@end{\special{ps: currentpoint currentpoint translate
521 1 \Gscale@x\space div 1 \Gscale@y\space div scale
522 neg exch neg exch translate}}

```

14.4 File Extensions

```

523 \@namedef{Gin@rule@.wmf}#1{{\wmf}}{#1}}
524 \@namedef{Gin@rule@.clp}#1{{\wmf}}{#1}}

```

15 Literal Postscript

Raw PostScript code, no save/restore.

```
525 \def\Gin@PS@raw#1{\special{ps: #1}}
```

PostScript code, to be surrounded by save/restore by the driver. Coordinate system standard PostScript, but with origin at current (T_EX) position.

```
526 \def\Gin@PS@restored#1{\special{" #1}}
```

PostScript code to be inserted in the Header section of the final PostScript. Must be issued on the first page of a document.

```
527 \def\Gin@PS@literal@header#1{\AtBeginDvi{\special{headertext=#1}}}
```

Name of external file, the contents of which are to be inserted in the Header section of the final PostScript. Must be issued on the first page of a document.

```
528 \def\Gin@PS@file@header#1{\AtBeginDvi{\special{header=#1}}}
```

```
529 </dvipsone>
```

16 dviwindo

A L^AT_EX 2_ε graphics driver file for Y&Y's dviwindo.

This driver now uses the same file as dvipsone.

17 dvitops

A L^AT_EX 2_ε graphics driver file for James Clark's dvitops

```
530 <*dvitops>
```

17.1 Rotation

```
531 \newcount\Grot@count
```

```
532 \Grot@count=\@ne
```

```
533 \def\Grot@start{\special{dvitops: origin
```

```
534   rot\the\@tempdima}%
```

```
535 \special{dvitops: begin rot\the\Grot@count}}%
```

```
536 \def\Grot@end{\special{dvitops: end}}%
```

```
537 \special{dvitops: rotate rot\the\Grot@count \space
```

```
538   \Grot@angle}%
```

```
539 \global\advance\Grot@count by\@ne}%
```

17.2 Graphic file inclusion

```
540 \def\Gin@include@eps#1{%
```

```
541 % These cause an arithmetic overflow, so I've commented them
```

```
542 % out. Presumably they were there for some reason.
```

```
543 % Any dvitops users out there??
```

```
544 % \multiply\Gin@req@width by \@m
```

```
545 % \multiply\Gin@req@height by \@m
```

```
546 \ifGin@clip
```

```
547   \typeout{no clipping support in dvitops}}%
```

```
548 \fi
```

```
549 \special{import #1\space \the\Gin@req@width\space
```

```

550 \the\Gin@req@height\space fill}}
551 </dvitops>

```

18 dvi2ps

A L^AT_EX 2_ε graphics driver file for original dvi2ps

```

552 <*dvi2ps>

```

18.1 Graphic file inclusion

```

553 \def\Gininclude@eps#1{%
554   \def\@tempa{!}%
555   \ifx\Gin@scaley\@tempa
556     \let\Gin@scaley\Gin@scalex
557   \else
558     \ifx\Gin@scalex\@tempa\let\Gin@scalex\Gin@scaley\fi
559   \fi
560   \ifGin@clip
561     \typeout{no clipping support in dvi2ps}%
562   \fi
563   \special{psfile=#1\space
564     hscale=\Gin@scalex\space 1000 mul
565     vscale=\Gin@scaley\space 1000 mul}}
566 </dvi2ps>

```

19 pctexps

A L^AT_EX 2_ε graphics driver file for Personal TeX's PTI Laser/PS; from information supplied by Lance Carnes and Tao Wang <pti@crl.com>.

```

567 <*pctexps>

```

19.1 Graphic file inclusion

```

568 \def\Gininclude@eps#1{%
569   \message{<#1>}%
570   \ifGin@clip
571     \typeout{no clipping support in pctexps}%
572   \fi
573   \Gin@req@width.03515\Gin@req@width
574   \Gin@req@height.03515\Gin@req@height
575   \special{ps:#1\space x=\strip@pt\Gin@req@width cm,
576     y=\strip@pt\Gin@req@height cm}}

577 \def\Gininclude@ps#1{%
578   \message{<#1>}%
579   \ifGin@clip
580     \typeout{no clipping support in pctexps}%
581   \fi
582   \hbox{\kern-\Gin@llx bp\raise-\Gin@lly bp\hbox{\special{ps:#1}}}%
583   \typeout{^^J%
584 -----^^J%
585 .ps graphics without bounding box information cannot be^^J%
586 scaled. If the file actually contains the information,^^J%

```



```

587 please rename the file to .eps file extension.^^J%
588 -----^^J}}

589 \def\Gin@extensions{.eps,.ps}
590 \@namedef{Gin@rule@.ps}#1{{ps}{.ps}{#1}}
591 \@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}

592 \def\Gin@PS@raw#1{\special{ps::#1}}
593 \def\Grot@start{%
594   \special{ps::gsave currentpoint
595     currentpoint translate \Grot@angle\space
596     rotate neg exch neg exch translate}}
597 \def\Grot@end{\special{ps:: currentpoint grestore moveto}}

598 \def\Gscale@start{\special{ps:: currentpoint currentpoint translate
599   \Gscale@x\space \Gscale@y\space scale neg exch neg exch translate}}
600 \def\Gscale@end{\special{ps:: currentpoint currentpoint translate
601   1 \Gscale@x\space div 1 \Gscale@y\space div scale
602   neg exch neg exch translate}}

603 </pctexps>

```

20 pctex32

A L^AT_EX 2_ε graphics driver file for Personal TeX's PC TeX for 32 bit Windows;
Code supplied by Tao Wang <pti@crl.com>.

20.1 Colour

Uses the generic 'color1' code.

```
604 <*pctex32>
```

20.2 Graphic file inclusion

```

605 % including PostScript graphics
606 \def\Gininclude@eps#1{%
607   \message{<#1>}%
608   \bgroup
609   \def\@tempa{!}%
610   \dimen@\Gin@req@width
611   \dimen@ii.1bp%
612   \divide\dimen@\dimen@ii
613   \@tempdima\Gin@req@height
614   \divide\@tempdima\dimen@ii
615   \special{PSfile="#1"\space
616     llx=\Gin@llx\space
617     lly=\Gin@lly\space
618     urx=\Gin@urx\space
619     ury=\Gin@ury\space
620     \ifx\Gin@scalex\@tempa\else rwi=\number\dimen@\space\fi
621     \ifx\Gin@scaley\@tempa\else rhi=\number\@tempdima\space\fi
622     \ifGin@clip clip\fi}%
623   \egroup}

        including BMP graphics
624 \def\Gininclude@bmp#1{%

```

```

625 \message{<#1>}%
626 \ifGin@clip
627 \typeout{no clipping support for BMP graphics in PTeX32}%
628 \fi
629 \Gin@req@width.03515\Gin@req@width
630 \Gin@req@height.03515\Gin@req@height
631 \special{bmp:#1\space x=\strip@pt\Gin@req@width cm,
632 y=\strip@pt\Gin@req@height cm}}
    including WMF graphics
633 \def\Gin@include@wmf#1{%
634 \message{<#1>}%
635 \ifGin@clip
636 \typeout{no clipping support for WMF graphics in PTeX32}%
637 \fi
638 \Gin@req@width.03515\Gin@req@width
639 \Gin@req@height.03515\Gin@req@height
640 \special{wmf:#1\space x=\strip@pt\Gin@req@width cm,
641 y=\strip@pt\Gin@req@height cm}}

```

20.3 Scaling and Rotating

PostScript rotation and scaling

```

642 \def\Grot@start{%
643 \special{ps:: gsave currentpoint
644 currentpoint translate \Grot@angle\space neg
645 rotate neg exch neg exch translate}}
646 \def\Grot@end{\special{ps:: currentpoint grestore moveto}}
647 \def\Gscale@start{\special{ps:: currentpoint currentpoint translate
648 \Gscale@x\space \Gscale@y\space scale neg exch neg exch translate}}
649 \def\Gscale@end{\special{ps:: currentpoint currentpoint translate
650 1 \Gscale@x\space div 1 \Gscale@y\space div scale
651 neg exch neg exch translate}}
652 \def\Gin@PS@raw#1{\special{ps:: #1}}
653 \def\Gin@PS@restored#1{\special{" #1}}

```

20.4 Default Extensions

```

654 \def\Gin@extensions{.eps,.ps,.wmf,.bmp}
655 \@namedef{Gin@rule@.ps}#1{{eps}{.ps}{#1}}
656 \@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
657 \@namedef{Gin@rule@.bmp}#1{{bmp}{.bmp}{#1}}
658 \@namedef{Gin@rule@.wmf}#1{{wmf}{.wmf}{#1}}
659 </pctex32>

```

21 pctxwin

A L^AT_EX 2_ε graphics driver file for Personal TeX's PC TeX for Windows; from information supplied by Lance Carnes and Tao Wang <pti@crl.com>.

```
660 (*pctxwin)
```

21.1 Graphic file inclusion

```
661 \def\Gin@include@eps#1{%
```

```

662 \message{<#1>}%
663 \ifGin@clip
664 \typeout{no clipping support in pctxwin}%
665 \fi
666 \Gin@req@width.03515\Gin@req@width
667 \Gin@req@height.03515\Gin@req@height
668 \special{eps:#1\space x=\strip@pt\Gin@req@width cm,
669 y=\strip@pt\Gin@req@height cm}}

670 \def\Gininclude@ps#1{%
671 \message{<#1>}%
672 \ifGin@clip
673 \typeout{no clipping support in pctxwin}%
674 \fi
675 \hbox{\kern-\Gin@llx bp\raise-\Gin@lly bp\hbox{\special{ps:#1}}}%
676 \typeout{^^J%
677 -----^^J%
678 .ps graphics without bounding box information cannot be^^J%
679 scaled. If the file actually contains the information,^^J%
680 please rename the file to .eps file extension.^^J%
681 -----^^J%
682 }}

683 \def\Gininclude@bmp#1{%
684 \message{<#1>}%
685 \ifGin@clip
686 \typeout{no clipping support in pctxwin}%
687 \fi
688 \Gin@req@width.03515\Gin@req@width
689 \Gin@req@height.03515\Gin@req@height
690 \special{bmp:#1\space x=\strip@pt\Gin@req@width cm,
691 y=\strip@pt\Gin@req@height cm}}

692 \def\Gininclude@wmf#1{%
693 \message{<#1>}%
694 \ifGin@clip
695 \typeout{no clipping support in pctxwin}%
696 \fi
697 \Gin@req@width.03515\Gin@req@width
698 \Gin@req@height.03515\Gin@req@height
699 \special{wmf:#1\space x=\strip@pt\Gin@req@width cm,
700 y=\strip@pt\Gin@req@height cm}}

701 \def\Gin@extensions{.eps,.ps,.wmf,.bmp}
702 \@namedef{Gin@rule@.bmp}#1{{bmp}}{#1}}
703 \@namedef{Gin@rule@.wmf}#1{{wmf}}{#1}}
704 \@namedef{Gin@rule@.ps}#1{{ps}}{.ps}{#1}}
705 \@namedef{Gin@rule@.eps}#1{{eps}}{.eps}{#1}}

706 </pctxwin>

```

22 pctxhp

A L^AT_EX 2_ε graphics driver file for Personal TeX's PTI Laser/HP; from information supplied by Lance Carnes and Tao Wang <pti@crl.com>.

```
707 (*pctxhp)
```

22.1 Graphic file inclusion

```
708 \def\Gininclude@pcl#1{%
709 \message{<#1>}%
710 \ifGin@clip
711 \typeout{no clipping support in pTeXhp}%
712 \fi
713 \hbox{\kern-\Gin@llx bp\raise-\Gin@lly bp\hbox{\special{pcl:#1}}}%
714 \typeout{WARNING: pTeXhp does not permit graphics to be scaled}}
715 \@namedef{Gin@rule@.pcl}#1{{pcl}}{#1}}
716 \def\Gin@extensions{.pcl}
717 \end{pTeXhp}
```

23 pubps

A L^AT_EX 2_ε graphics driver file for Arbortext's PUBps; information from Peter R Wilson pwilson@rdrc.rpi.edu.

```
718 \begin{pubps}
```

23.1 Rotation

```
719 \def\Grot@start{\special{ps: gsave currentpoint
720 currentpoint translate \Grot@angle\space
721 rotate neg exch neg exch translate}}
722 \def\Grot@end{\special{ps: currentpoint grestore moveto}}
723 \end{pubps}
```

24 dviwin

A L^AT_EX 2_ε graphics driver file for Hippocrates Sendoukas' dviwin

```
724 \begin{dviwin}
```

24.1 Graphic file inclusion

Dviwin sorts out the graphics type itself based on extension. They all use the same `\special`, so as far as `graphics.sty` is concerned they are all the same 'type'. Use 'bmp' for the type as that is as good a name as any. Make this the default.

```
725 \@namedef{Gin@rule@*}#1{{bmp}}{#1}}
726 \def\Gininclude@bmp#1{%
727 \raise\Gin@req@height\hbox{%
728 \special{anisoscale #1,
729 \the\Gin@req@width\space \the\Gin@req@height}}}
```

The only exception is EPS files, as they may be read for BoundingBox

```
730 \@namedef{Gin@rule@.ps}#1{{eps}}{.ps}{#1}}
731 \@namedef{Gin@rule@.eps}#1{{eps}}{.eps}{#1}}
732 \let\Gininclude@eps\Gininclude@bmp
```

Add a few default extensions so `\includegraphics{a}` will pick up `a.eps` or `a.wmf`. This list can be reset with `\DeclareGraphicsExtensions`. Other extensions not in the list may be used explicitly, eg `\includegraphics{a.gif}` should work as long as dviwin has access to a gif filter. If `.gif` is added using `\DeclareGraphicsExtensions` then `\includegraphics{a}` would also find `a.gif`.

```

733 \def\Gin@extensions{.eps,.ps,.wmf,.tif}
734 </dviwin>

```

25 ln

A L^AT_EX 2_ε graphics driver file for B Hamilton Kelly's ln03 driver. Untested, but based on the graphics macros distributed with the driver.

```

735 <*\ln>

```

25.1 Graphic file inclusion

```

736 \def\Gininclude@sixel#1{\special{ln03:sixel #1}}
737 </ln>

```

26 truetex

A L^AT_EX 2_ε graphics driver file for Kinch 'truetex' driver.

```

738 <*\truetex>

```

26.1 Colour

Uses the 'color4' colour code.

26.2 Graphic file inclusion

EPS File inclusion: DVIPS style.

```

739 \def\Gininclude@eps#1{%
740   \message{<#1>}%
741   \bgroup
742   \def\@tempa{!}%
743   \dimen@\Gin@req@width
744   \dimen@ii.1bp%
745   \divide\dimen@\dimen@ii
746   \@tempdima\Gin@req@height
747   \divide\@tempdima\dimen@ii
748   \special{PSfile="#1"\space
749     llx=\Gin@llx\space
750     lly=\Gin@lly\space
751     urx=\Gin@urx\space
752     ury=\Gin@ury\space
753     \ifx\Gin@scalex\@tempa\else rwi=\number\dimen@\space\fi
754     \ifx\Gin@scaley\@tempa\else rhi=\number\@tempdima\space\fi
755     \ifGin@clip clip\fi}%
756   \egroup}

```

bmp File Inclusion.

```

757 \def\Gininclude@bmp#1{%
758   \message{<#1>}%
759   \special{bmpfile #1}}

```

tif(f) File inclusion

```
760 \def\Gininclude@tiff#1{%  
761 \message{<#1>}%  
762 \special{tiff file #1}}
```

26.3 Literal PostScript

This is not supported, so uses ‘nops’ code.

26.4 Default Rules

Support (e)ps, tif and bmp, default to eps.

```
763 \def\Gin@extensions{.eps,.ps}  
764 \@namedef{Gin@rule@.ps}#1{{eps}}{.ps}{#1}}  
765 \@namedef{Gin@rule@.eps}#1{{eps}}{.eps}{#1}}  
766 \@namedef{Gin@rule@.tif}#1{{tiff}}{#1}}  
767 \@namedef{Gin@rule@.bmp}#1{{bmp}}{#1}}  
  
768 \@namedef{Gin@rule@*}#1{{eps}}{\Gin@ext}{#1}}  
769 </truetex>
```

27 tcidvi

A L^AT_EX 2_ε graphics driver file for Scientific Word/Workplace. Actually for the Kinch truetex driver, augmented with extra \special handling with the DLL supplied with SW.

```
770 <*tcidvi>
```

27.1 Colour

Uses the ‘color4’ colour code.

The above colours are handled by the Kinch-supplied dll The TCI dll adds support for \colorbox, but only grey scale The code below accepts any color model, but only the red component is used.

```
771 \AtBeginDocument{\def\color@block#1#2#3{%  
772 {\rlap{\ifcolors@  
773 \@defaultunits\count@\current@color\@nnil  
774 \dimen@\count@\p@  
775 \divide\dimen@\@cclv  
776 \dimen@ii#2%  
777 \advance\dimen@ii#3%  
778 \lower#3\hbox{%  
779 \special{language "Scientific Word";%  
780 type "greybox";%  
781 greyscale \strip@pt\dimen@;%  
782 height \the\dimen@ii;%  
783 width \the#1;%  
784 depth 0pt;}}%  
785 \fi}}}}
```

27.2 Graphic file inclusion

EPS File inclusion.

```
786 \def\Gininclude@eps#1{%
787   \message{<#1>}%
788   \raise\Gin@req@height\hbox{%
```

If the bounding box has been changed by a trim or viewport key then need to calculate the crop ratios based on the original bb coordinates. (This assumes that clip key is also used).

```
789   \ifx\Gin@llx\undefined
790   \else
791     \@tempdimb \Gin@ourx bp%
792     \advance\@tempdimb-\Gin@llx bp%
793     \@tempdima \Gin@llx bp%
794     \advance\@tempdima-\Gin@llx bp%
795     \Gscale@div\TCI@cropleft\@tempdima\@tempdimb
796     \@tempdima \Gin@urx bp%
797     \advance\@tempdima-\Gin@llx bp%
798     \Gscale@div\TCI@cropright\@tempdima\@tempdimb
799     \@tempdimb \Gin@oury bp%
800     \advance\@tempdimb-\Gin@olly bp%
801     \@tempdima \Gin@olly bp%
802     \advance\@tempdima-\Gin@olly bp%
803     \Gscale@div\TCI@cropbottom\@tempdima\@tempdimb
804     \@tempdima \Gin@ury bp%
805     \advance\@tempdima-\Gin@olly bp%
806     \Gscale@div\TCI@croptop\@tempdima\@tempdimb
807   \fi
808   \special{%
809     language \TCI@language;%
810     type \TCI@type;%
811     valid_file \TCI@validfile;%
812     width \the\Gin@req@width;%
813     height \the\Gin@req@height;%
814     depth Opt;%
815     original-width \the\Gin@nat@width;%
816     original-height \the\Gin@nat@height;%
817     cropleft "\TCI@cropleft";%
818     croptop "\TCI@croptop";%
819     cropright "\TCI@cropright";%
820     cropbottom "\TCI@cropbottom";%
821     filename '#1';%
822     \ifx\TCI@temp\@empty\else tempfilename \TCI@temp;\fi
823   }}}
```

Default values so documents produced elsewhere should work

```
824 \def\TCI@language{"Scientific Word"}
825 \def\TCI@type{"GRAPHIC"}
826 \def\TCI@validfile{'F'}
827 \def\TCI@cropleft{0}
828 \def\TCI@croptop{1}
829 \def\TCI@cropright{1}
830 \def\TCI@cropbottom{0}
831 \let\TCI@temp\@empty
```

Non PS Graphic files.

File inclusion macro is always the same. Use a different name though as LaTeX thinks it can read eps files for BoundingBox.

```
832 \let\Gininclude@bmp\Gininclude@eps
```

27.3 Literal PostScript

This is not supported, so uses ‘nops’ code.

27.4 Default Rules

SW always gives the full name with extension. So leave this list empty.

```
833 \def\Gin@extensions{}
```

.ps .PS .eps .EPS are (E)PS rest are ‘bmp’ which is a catch all type for anything that the import filter can handle.

```
834 \@namedef{Gin@rule@.ps}#1{{eps}}{.ps}{#1}}
```

```
835 \@namedef{Gin@rule@.eps}#1{{eps}}{.eps}{#1}}
```

```
836 \@namedef{Gin@rule@.PS}#1{{eps}}{.PS}{#1}}
```

```
837 \@namedef{Gin@rule@.EPS}#1{{eps}}{.EPS}{#1}}
```

```
838 \@namedef{Gin@rule@*}#1{{bmp}}{\Gin@ext}{#1}}
```

```
839 \</tcidvi>
```

28 Literal Postscript

Most drivers writing to PostScript allow some form of ‘literal’ PostScript `\special` that inserts code into the final PostScript output. However Non-PS drivers can not support this (and some PS one’s can’t either). The code here makes all these commands no ops. Individual driver sections may define the commands to do something useful.

```
840 \<*nops>
```

Raw PostScript code, no save/restore. Coordinate system unspecified.

```
841 \def\Gin@PS@raw#1{}
```

PostScript code, to be surrounded by save/restore by the driver. Coordinate system standard PostScript, but with origin at current (TeX) position.

```
842 \def\Gin@PS@restored#1{}
```

PostScript code to be inserted in the Header section of the final PostScript. Must be issued on the first page of a document.

```
843 \def\Gin@PS@literal@header#1{}
```

Name of external file, the contents of which are to be inserted in the Header section of the final PostScript. Must be issued on the first page of a document.

```
844 \def\Gin@PS@file@header#1{}
```

```
845 \</nops>
```


29 Graphics Inclusion Rules

```

846 \psrules)
847 \def\Gin@extensions{.eps,.ps}
848 \@namedef{Gin@rule@.ps}#1{{eps}{.ps}{#1}}
849 \@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
850 \@namedef{Gin@rule@*}#1{{eps}{\Gin@ext}{#1}}
851 \psrules)
852 \psrulesZ)
853 \def\Gin@extensions{.eps,.ps,.eps.gz,.ps.gz,.eps.Z,.mps}
854 \@namedef{Gin@rule@.ps}#1{{eps}{.ps}{#1}}
855 \@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
856 \@namedef{Gin@rule@.mps}#1{{eps}{.mps}{#1}}
857 \@namedef{Gin@rule@.pz}#1{{eps}{.bb}{#1}}
858 \@namedef{Gin@rule@.eps.Z}#1{{eps}{.eps.bb}{#1}}
859 \@namedef{Gin@rule@.ps.Z}#1{{eps}{.ps.bb}{#1}}
860 \@namedef{Gin@rule@.ps.gz}#1{{eps}{.ps.bb}{#1}}
861 \@namedef{Gin@rule@.eps.gz}#1{{eps}{.eps.bb}{#1}}
862 \@namedef{Gin@rule@*}#1{{eps}{\Gin@ext}{#1}}
863 \psrulesZ)
864 \dosrules)
865 \psrulesZ)\def\Gin@extensions{.eps,.ps,.pcx,.bmp}
866 \@namedef{Gin@rule@.pcx}#1{{bmp}{.pcx}{#1}}
867 \@namedef{Gin@rule@.bmp}#1{{bmp}{.bmp}{#1}}
868 \@namedef{Gin@rule@.msp}#1{{bmp}{.msp}{#1}}
869 \dosrules)
870 \macrules)
871 \def\Gin@extensions{.ps,.eps,.pict}
872 \@namedef{Gin@rule@.ps}#1{{eps}{.ps}{#1}}
873 \@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
874 \@namedef{Gin@rule@.pict}#1{{pict}{.pict}{#1}}
875 \@namedef{Gin@rule@.pntg}#1{{pntg}{.pntg}{#1}}
876 \@namedef{Gin@rule@}#1{{pict}{\relax}{#1}}
877 \macrules)
878 \tiffrules)
879 \@namedef{Gin@rule@.tif}#1{{tiff}{.tif}{#1}}
880 \tiffrules)

```