Graphics drivers for LaTeX 2$_\varepsilon$*

Sebastian Rahtz and David Carlisle

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This file is maintained by the LaTeX Project team. Bug reports can be opened (category `graphics`) at https://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 Color

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

- color1: 'dvips' style color specials.
- color2: 'textures' style color specials.
- color3: Color implemented via literal PostScript specials.
- color4: Color 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 TeX.

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 LaTeX color commands.

```
⟨*color1 | color2 | color3 | color4⟩
\def\c@lor@arg#1{%
  \dimen@#1\p@
  \ifdim\dimen@<\z@\dimen@\maxdimen\fi
  \ifdim\dimen@>\p@
    \PackageError{color}{Argument `#1' not in range [0,1]}\@ehd
  \fi}
```

*Version v3.0m, revised 2026-06-26

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.

```
\def\color@gray#1#2{%
  \c@lor@arg{#2}%
⟨color4⟩  \c@lor@rgb@RGB\@tempa
⟨color1⟩  \edef#1{gray #2}%
⟨color2⟩  \edef#1{rgb #2. #2. #2.}%
⟨color3⟩  \edef#1{#2 setgray}%
⟨color4⟩  \edef#1{\@tempa\@tempa\@tempa}%
  }
\def\color@cmyk#1#2{\c@lor@@cmyk#2\@@#1}
\def\c@lor@@cmyk#1,#2,#3,#4\@@#5{%
  \c@lor@arg{#4}%
⟨color4⟩    \dimen@ii#4\p@
  \c@lor@arg{#1}%
⟨color4⟩  \c@lor@cmyk@RGB\@tempa
  \c@lor@arg{#2}%
⟨color4⟩  \c@lor@cmyk@RGB\@tempb
  \c@lor@arg{#3}%
⟨color4⟩  \c@lor@cmyk@RGB\@tempc
⟨color1⟩  \edef#5{cmyk #1 #2 #3 #4}%
⟨color2⟩  \edef#5{cmyk #1. #2. #3. #4.}%
⟨color3⟩  \edef#5{#1 #2 #3 #4 setcmykcolor}%
⟨color4⟩  \edef#5{\@tempa\@tempb\@tempc}%
  }
```

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

```
⟨*color4⟩
\def\c@lor@cmyk@RGB#1{%
  \advance\dimen@-\p@
  \advance\dimen@\dimen@ii
  \dimen@-\@cclv\dimen@
  \divide\dimen@\p@
  \count@\ifdim\dimen@<\z@\z@\else\dimen@\fi
  \edef#1{\the\count@\space}}
⟨/color4⟩
\def\color@rgb#1#2{\c@lor@@rgb#2\@@#1}
\def\c@lor@@rgb#1,#2,#3\@@#4{%
  \c@lor@arg{#1}%
⟨color4⟩  \c@lor@rgb@RGB\@tempa
  \c@lor@arg{#2}%
⟨color4⟩  \c@lor@rgb@RGB\@tempb
  \c@lor@arg{#3}%
⟨color4⟩  \c@lor@rgb@RGB\@tempc
⟨color1⟩  \edef#4{rgb #1 #2 #3}%
⟨color2⟩  \edef#4{rgb #1. #2. #3.}%
⟨color3⟩  \edef#4{#1 #2 #3 setrgbcolor}%
⟨color4⟩  \edef#4{\@tempa\@tempb\@tempc}%
  }
```

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

```
⟨*color4⟩
\def\c@lor@rgb@RGB#1{%
  \dimen@\@cclv\dimen@
  \count@\dimen@
  \divide\count@\p@
  \edef#1{\the\count@\space}}
⟨/color4⟩
\def\color@RGB#1#2{\c@lor@@RGB#2\@@#1}
\def\c@lor@@RGB#1,#2,#3\@@#4{%
⟨!color4⟩ \c@lor@RGB@rgb{#1}\@tempa
⟨!color4⟩ \c@lor@RGB@rgb{#2}\@tempb
⟨!color4⟩ \c@lor@RGB@rgb{#3}\@tempc
⟨!color4⟩ \c@lor@@rgb\@tempa,\@tempb,\@tempc\@@#4%
⟨color4⟩  \edef#4{#1 #2 #3}%
  }
```

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

```
⟨*!color4⟩
\def\c@lor@RGB@rgb#1#2{%
  \dimen@#1\p@
  \divide\dimen@\@cclv
  \edef#2{\strip@pt\dimen@}}
⟨/!color4⟩
⟨*color1 | color3⟩
\def\color@hsb#1#2{\c@lor@@hsb#2\@@#1}
\def\c@lor@@hsb#1,#2,#3\@@#4{%
  \c@lor@arg{#1}%
  \c@lor@arg{#2}%
  \c@lor@arg{#3}%
⟨color1⟩  \edef#4{hsb #1 #2 #3}%
⟨color3⟩  \edef#4{#1 #2 #3 sethsbcolor}%
  }
⟨/color1 | color3⟩
\def\color@named#1#2{\c@lor@@named#2,,\@@#1}
\def\c@lor@@named#1,#2,#3\@@#4{%
  \@ifundefined{col@#1}%
    {\PackageError{color}{Undefined color `#1'}\@ehd}%
⟨color1&!dvipsone⟩  {\edef#4{ #1}}%
⟨color2⟩  {\edef#4{ #1 \if!#2!\else #2.\fi}}%
⟨color3 | dvipsone | color4⟩  {\edef#4{\csname col@#1\endcsname}}%
  }
```

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

```
⟨*color1 | color2⟩
\def\c@lor@to@ps#1 #2\@@{\csname c@lor@ps@#1\endcsname#2 \@@}
⟨/color1 | color2⟩
⟨*color3⟩
\def\c@lor@to@ps#1\@@{#1}
⟨/color3⟩
⟨*color4⟩
```

```
\def\c@lor@to@ps#1#2 #3 #4\@@{%
  #1#2 255 div #3 255 div #4 255 div setrgbcolor}
⟨/color4⟩
⟨*color1⟩
\def\c@lor@ps@#1 #2\@@{TeXDict begin #1 end}
\def\c@lor@ps@rgb#1\@@{#1 setrgbcolor}
\def\c@lor@ps@hsb#1\@@{#1 sethsbcolor}
\def\c@lor@ps@cmyk#1\@@{#1 setcmykcolor}
\def\c@lor@ps@gray#1\@@{#1 setgray}
⟨/color1⟩
⟨*color2⟩
\def\c@lor@to@ps@#1 #2\@@{\csname c@lor@ps@#1@\endcsname#2 \@@}
\def\c@lor@ps@#1 #2\@@{%
  \expandafter\expandafter\expandafter
     \c@lor@to@ps@\csname col@#1\expandafter\endcsname\space#2. \@@{#1}}
\def\c@lor@ps@rgb#1. #2. #3. #4\@@{#1 #2 #3 setrgbcolor}
\def\c@lor@ps@rgb@#1. #2. #3. #4. #5\@@#6{#1 #2 #3 setrgbcolor}
\def\c@lor@ps@cmyk#1. #2. #3. #4. #5. #6\@@{#1 #2 #3 #4 setcmykcolor}
\def\c@lor@ps@cmyk@#1. #2. #3. #4. #5. #6\@@#7{%
       #1 #2 #3 #4  (#7)  findcustomcmykcolor
       \if!\@firstofone#5!1 \else#5 \fi setcustomcolor}
⟨/color2⟩
⟨color1&!dvipsone⟩\def\current@color{ Black}
⟨color1 & dvipsone⟩\def\current@color{gray 0}
⟨color2⟩\def\current@color{rgb 0. 0. 0.}
⟨color3⟩\def\current@color{0 setgray}
⟨color4⟩\def\current@color{0 0 0}
⟨*color1⟩
\def\set@color{%
⟨!dvipsone&!dvipdf⟩  \special{color push  \current@color
⟨dvipsone⟩           \special{color push}\special{color \current@color
⟨dvipdf⟩             \special{pdf: /C  \current@color\space<<
                            }\aftergroup\reset@color}
\def\reset@color{\special{%
⟨!dvipdf⟩         color pop}}
⟨dvipdf⟩          pdf: /C >> }}
\def\set@page@color{\special{%
⟨!dvipdf⟩         background \current@color}}
⟨dvipdf⟩          pdf: /BG \current@color}}
\def\define@color@named#1#2{%
⟨!dvipsone⟩   \expandafter\let\csname col@#1\endcsname\@nnil}
⟨dvipsone⟩    \expandafter\edef\csname col@#1\endcsname{#2}}
⟨dvips⟩       \def\no@page@color{\special{background \string"newpath clip}}
⟨/color1⟩
⟨*color2⟩
\def\set@color{%
  \special{color push}%
  \special{color \current@color}%
  \aftergroup\reset@color}
\def\reset@color{\special{color pop}}
\def\set@page@color{\c@lor@special\sixt@@n{background \current@color}}
\def\define@color@named#1#2{%
  \AtBeginDvi{\special{color define #1 #2}}%
```

```
  \expandafter\edef\csname col@#1\endcsname{#2}}
⟨/color2⟩
⟨*color3⟩
\def\set@color{%
  \Gin@PS@raw{\current@color}\aftergroup\reset@color}
\def\reset@color{\Gin@PS@raw{\current@color}}
⟨/color3⟩
⟨*color4⟩
\def\set@color{%
  \special{textcolor: \current@color}\aftergroup\reset@color}
\def\reset@color{\special{textcolor: \current@color}}
⟨/color4⟩
⟨*color3 | color4⟩
\def\set@page@color{%
  \c@lor@special\sixt@@n{background color ignored: \current@color}}
\def\define@color@named#1#2{%
  \expandafter\edef\csname col@#1\endcsname{#2}}
⟨/color3 | color4⟩
⟨/color1 | color2 | color3 | color4⟩
⟨*colorfix⟩
\AtBeginDocument{%
  \let\@ldc@l@r\color
  \def\color{\if@inlabel\leavevmode\fi\@ldc@l@r}%
  \let\@lduseb@x\usebox
  \def\usebox#1{\@lduseb@x{#1}\set@color}}
⟨/colorfix⟩
⟨*dvipsnames⟩
\DefineNamedColor{named}{GreenYellow}   {cmyk}{0.15,0,0.69,0}
\DefineNamedColor{named}{Yellow}        {cmyk}{0,0,1,0}
\DefineNamedColor{named}{Goldenrod}     {cmyk}{0,0.10,0.84,0}
\DefineNamedColor{named}{Dandelion}     {cmyk}{0,0.29,0.84,0}
\DefineNamedColor{named}{Apricot}       {cmyk}{0,0.32,0.52,0}
\DefineNamedColor{named}{Peach}         {cmyk}{0,0.50,0.70,0}
\DefineNamedColor{named}{Melon}         {cmyk}{0,0.46,0.50,0}
\DefineNamedColor{named}{YellowOrange}  {cmyk}{0,0.42,1,0}
\DefineNamedColor{named}{Orange}        {cmyk}{0,0.61,0.87,0}
\DefineNamedColor{named}{BurntOrange}   {cmyk}{0,0.51,1,0}
\DefineNamedColor{named}{Bittersweet}   {cmyk}{0,0.75,1,0.24}
\DefineNamedColor{named}{RedOrange}     {cmyk}{0,0.77,0.87,0}
\DefineNamedColor{named}{Mahogany}      {cmyk}{0,0.85,0.87,0.35}
\DefineNamedColor{named}{Maroon}        {cmyk}{0,0.87,0.68,0.32}
\DefineNamedColor{named}{BrickRed}      {cmyk}{0,0.89,0.94,0.28}
\DefineNamedColor{named}{Red}           {cmyk}{0,1,1,0}
\DefineNamedColor{named}{OrangeRed}     {cmyk}{0,1,0.50,0}
\DefineNamedColor{named}{RubineRed}     {cmyk}{0,1,0.13,0}
\DefineNamedColor{named}{WildStrawberry}{cmyk}{0,0.96,0.39,0}
\DefineNamedColor{named}{Salmon}        {cmyk}{0,0.53,0.38,0}
\DefineNamedColor{named}{CarnationPink} {cmyk}{0,0.63,0,0}
\DefineNamedColor{named}{Magenta}       {cmyk}{0,1,0,0}
\DefineNamedColor{named}{VioletRed}     {cmyk}{0,0.81,0,0}
\DefineNamedColor{named}{Rhodamine}     {cmyk}{0,0.82,0,0}
\DefineNamedColor{named}{Mulberry}      {cmyk}{0.34,0.90,0,0.02}
\DefineNamedColor{named}{RedViolet}     {cmyk}{0.07,0.90,0,0.34}
```

```
\DefineNamedColor{named}{Fuchsia}       {cmyk}{0.47,0.91,0,0.08}
\DefineNamedColor{named}{Lavender}      {cmyk}{0,0.48,0,0}
\DefineNamedColor{named}{Thistle}       {cmyk}{0.12,0.59,0,0}
\DefineNamedColor{named}{Orchid}        {cmyk}{0.32,0.64,0,0}
\DefineNamedColor{named}{DarkOrchid}    {cmyk}{0.40,0.80,0.20,0}
\DefineNamedColor{named}{Purple}        {cmyk}{0.45,0.86,0,0}
\DefineNamedColor{named}{Plum}          {cmyk}{0.50,1,0,0}
\DefineNamedColor{named}{Violet}        {cmyk}{0.79,0.88,0,0}
\DefineNamedColor{named}{RoyalPurple}   {cmyk}{0.75,0.90,0,0}
\DefineNamedColor{named}{BlueViolet}    {cmyk}{0.86,0.91,0,0.04}
\DefineNamedColor{named}{Periwinkle}    {cmyk}{0.57,0.55,0,0}
\DefineNamedColor{named}{CadetBlue}     {cmyk}{0.62,0.57,0.23,0}
\DefineNamedColor{named}{CornflowerBlue}{cmyk}{0.65,0.13,0,0}
\DefineNamedColor{named}{MidnightBlue}  {cmyk}{0.98,0.13,0,0.43}
\DefineNamedColor{named}{NavyBlue}      {cmyk}{0.94,0.54,0,0}
\DefineNamedColor{named}{RoyalBlue}     {cmyk}{1,0.50,0,0}
\DefineNamedColor{named}{Blue}          {cmyk}{1,1,0,0}
\DefineNamedColor{named}{Cerulean}      {cmyk}{0.94,0.11,0,0}
\DefineNamedColor{named}{Cyan}          {cmyk}{1,0,0,0}
\DefineNamedColor{named}{ProcessBlue}   {cmyk}{0.96,0,0,0}
\DefineNamedColor{named}{SkyBlue}       {cmyk}{0.62,0,0.12,0}
\DefineNamedColor{named}{Turquoise}     {cmyk}{0.85,0,0.20,0}
\DefineNamedColor{named}{TealBlue}      {cmyk}{0.86,0,0.34,0.02}
\DefineNamedColor{named}{Aquamarine}    {cmyk}{0.82,0,0.30,0}
\DefineNamedColor{named}{BlueGreen}     {cmyk}{0.85,0,0.33,0}
\DefineNamedColor{named}{Emerald}       {cmyk}{1,0,0.50,0}
\DefineNamedColor{named}{JungleGreen}   {cmyk}{0.99,0,0.52,0}
\DefineNamedColor{named}{SeaGreen}      {cmyk}{0.69,0,0.50,0}
\DefineNamedColor{named}{Green}         {cmyk}{1,0,1,0}
\DefineNamedColor{named}{ForestGreen}   {cmyk}{0.91,0,0.88,0.12}
\DefineNamedColor{named}{PineGreen}     {cmyk}{0.92,0,0.59,0.25}
\DefineNamedColor{named}{LimeGreen}     {cmyk}{0.50,0,1,0}
\DefineNamedColor{named}{YellowGreen}   {cmyk}{0.44,0,0.74,0}
\DefineNamedColor{named}{SpringGreen}   {cmyk}{0.26,0,0.76,0}
\DefineNamedColor{named}{OliveGreen}    {cmyk}{0.64,0,0.95,0.40}
\DefineNamedColor{named}{RawSienna}     {cmyk}{0,0.72,1,0.45}
\DefineNamedColor{named}{Sepia}         {cmyk}{0,0.83,1,0.70}
\DefineNamedColor{named}{Brown}         {cmyk}{0,0.81,1,0.60}
\DefineNamedColor{named}{Tan}           {cmyk}{0.14,0.42,0.56,0}
\DefineNamedColor{named}{Gray}          {cmyk}{0,0,0,0.50}
\DefineNamedColor{named}{Black}         {cmyk}{0,0,0,1}
\DefineNamedColor{named}{White}         {cmyk}{0,0,0,0}
```
⟨/dvipsnames⟩

3 dvips

A LaTeX 2ε graphics driver file for Tom Rokicki's *dvips* driver; tested with version 5.58f.

⟨∗dvips⟩

3.1 Color

Uses the generic 'color1' code.

3.2 File inclusion

`\Ginclude@eps` `#1` input file (or command)

```
\def\Ginclude@eps#1{%
 \message{<#1>}%
 \bgroup
```

dvips likes to work with its own pixel resolution, so mangle the sizes slightly.

```
 \def\@tempa{!}%
 \dimen@\Gin@req@width
 \dimen@ii.1bp%
 \divide\dimen@\dimen@ii
 \@tempdima\Gin@req@height
 \divide\@tempdima\dimen@ii
   \special{PSfile="#1"\space
     llx=\Gin@llx\space
     lly=\Gin@lly\space
     urx=\Gin@urx\space
     ury=\Gin@ury\space
     \ifx\Gin@scalex\@tempa\else rwi=\number\dimen@\space\fi
     \ifx\Gin@scaley\@tempa\else rhi=\number\@tempdima\space\fi
     \ifGin@clip clip\fi}%
 \egroup}
```

`\Ginclude@bmp` `#1` input file; if zero size is requested, the graphic will come at 'natural' size.

```
\def\Ginclude@bmp#1{%
 \message{<#1>}%
 \dimen@\Gin@req@height
 \advance\dimen@ by-\Gin@lly bp
 \kern-\Gin@llx bp\raise\Gin@req@height\hbox{%
  \ifdim\Gin@urx bp=\z@
    \ifdim\Gin@ury bp=\z@
       \special{em: graph #1}%
    \else
       \special{em: graph #1,\Gin@urx bp}%
    \fi
 \else
       \special{em: graph #1,\Gin@urx bp,\Gin@ury bp}%
 \fi
 }%
}
```

`\Ginclude@pict` `\Ginclude@pntg` `\oztex@include` PICT/PNTG format from the Mac. Actually only currently supported by the version of dvips distributed with OzTEX, and with the built in OzTEX drivers, 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.

```
\def\oztex@include#1#2{%
 \dimen@1bp%
 \divide\Gin@req@width\dimen@
 \divide\Gin@req@height\dimen@
 \special{#1=#2\space
   \@width=\number\Gin@req@width \space
   \@height=\number\Gin@req@height}}
```

```
\def\Ginclude@pntg{\oztex@include{pntg}}
\def\Ginclude@pict{\oztex@include{pict}}
```

3.3 Rotation

```
\def\Grot@start{%
 \special{ps: gsave currentpoint
 currentpoint translate \Grot@angle\space neg
 rotate neg exch neg exch translate}}
\def\Grot@end{\special{ps: currentpoint grestore moveto}}
```

3.4 Scaling

```
\def\Gscale@start{\special{ps:  currentpoint currentpoint translate
  \Gscale@x\space \Gscale@y\space scale neg exch neg exch translate}}
\def\Gscale@end{\special{ps:  currentpoint currentpoint translate
  1 \Gscale@x\space div 1 \Gscale@y\space div scale
  neg exch neg exch translate}}
```

4 Literal Postscript

Raw PostScript code, no save/restore.

```
\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 (TEX) position.

```
\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.

```
\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.

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

5 Page Size

```
\@ifundefined{ifGin@setpagesize}
  {\expandafter\let\csname ifGin@setpagesize\expandafter\endcsname
                     \csname iftrue\endcsname}
  {}
\ifGin@setpagesize
\ifx\paperwidth\@undefined\else
  \AtBeginDocument{\AtBeginDvi{%
    \begingroup
    \ifx\stockwidth\@undefined\else
      \paperwidth\stockwidth
      \paperheight\stockheight
    \fi
    \ifdim\paperwidth>\z@
      \ifdim\paperheight>\z@
        \special{papersize=\the\paperwidth,\the\paperheight}%
      \fi
```

```
    \fi
    \endgroup}}
\fi
\fi
```
⟨/dvips⟩

6 dvipdf

A LaTeX 2_ε graphics driver file for *dvipdf* driver.

⟨∗dvipdf⟩

6.1 Color

Uses the generic 'color1' code.

6.2 File inclusion

`\Ginclude@eps` `#1` input file (or command)

```
\def\Ginclude@eps#1{%
 \message{<#1>}%
  \bgroup
```

dvips likes to work with its own pixel resolution, so mangle the sizes slightly.

```
  \def\@tempa{!}%
  \dimen@\Gin@req@width
  \dimen@ii.1bp%
  \divide\dimen@\dimen@ii
  \@tempdima\Gin@req@height
  \divide\@tempdima\dimen@ii
    \special{PSfile="#1"\space
      llx=\Gin@llx\space
      lly=\Gin@lly\space
      urx=\Gin@urx\space
      ury=\Gin@ury\space
      \ifx\Gin@scalex\@tempa\else rwi=\number\dimen@\space\fi
      \ifx\Gin@scaley\@tempa\else rhi=\number\@tempdima\space\fi
      \ifGin@clip clip\fi}%
  \egroup}
```

`\Ginclude@bmp` `#1` input file; if zero size is requested, the graphic will come at 'natural' size.

```
\def\Ginclude@bmp#1{%
  \message{<#1>}%
  \dimen@\Gin@req@height
  \advance\dimen@ by-\Gin@lly bp
  \kern-\Gin@llx bp\raise\Gin@req@height\hbox{%
   \ifdim\Gin@urx bp=\z@
     \ifdim\Gin@ury bp=\z@
        \special{pdf: /GRAPH  #1}%
     \else
        \special{pdf: /GRAPH  #1 \number\Gin@req@width sp}%
     \fi
  \else
        \special{pdf: /GRAPH  #1 \number\Gin@req@width sp
```

```
                                \number\Gin@req@height sp}%
  \fi}}
```

6.3 Rotation

```
\def\Grot@start{%
\special{pdf: /ROT \Grot@angle\space << }}
\def\Grot@end{\special{pdf: /ROT >> }}
```

6.4 Scaling

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

7 Literal Postscript

Raw PostScript code, no save/restore.

```
\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 (TEX) position.

```
\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.

```
\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.

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

7.1 File extensions

```
\@namedef{Gin@rule@.msp}#1{{bmp}{.bb}{#1}}
\@namedef{Gin@rule@.jpg}#1{{bmp}{.bb}{#1}}
\@namedef{Gin@rule@.bmp}#1{{bmp}{.bb}{#1}}
```

⟨/dvipdf⟩

8 OzTEX

A LATEX 2_ε graphics driver file for OzTEX (versions 1.42 and later), by Andrew Trevorrow.

⟨∗oztex⟩

8.1 Graphics inclusion

```
\def\Ginclude@eps{\Oztex@Include{epsf}}
\def\Ginclude@pntg{\Oztex@Include{pntg}}
\def\Ginclude@pict{\Oztex@Include{pict}}
\def\Oztex@Include#1#2{%
 \ifGin@clip
  \typeout{No clipping support in OzTeX}%
 \fi
 \divide\Gin@req@width by 65781% convert sp to bp
```

```
 \divide\Gin@req@height by 65781%
 \special{#1=#2\space
  width=\number\Gin@req@width \space
  height=\number\Gin@req@height
 }%
}
```
⟨/oztex⟩

9 Textures

A LaTeX 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!

⟨∗textures⟩

9.1 Graphics inclusion

```
\PackageInfo{graphics/color}
  {This file uses the advanced color support\MessageBreak
   available in textures1.7\MessageBreak
   If you are using color with an earlier version\MessageBreak
   of textures, edit graphics.ins where marked,\MessageBreak
   and re-latex graphics.ins.\MessageBreak\MessageBreak
   If you are using textures1.7\MessageBreak
   you may want to delete this warning\MessageBreak
   from textures.def.\MessageBreak\MessageBreak
   The code for scaling/rotation and file inclusion\MessageBreak
   in this file is still rudimentary, and does not\MessageBreak
   use textures' full capabilities.\MessageBreak\MessageBreak
   A new textures.def is currently being developed\@gobble}
\def\Ginclude@eps{\Textures@Include{illustration}}
\def\Ginclude@pict{\Textures@Include{pictfile}}
\def\Textures@Include#1#2{%
 \def\@tempa{!}%
 \ifx\Gin@scaley\@tempa
     \let\Gin@scaley\Gin@scalex
 \else
    \ifx\Gin@scalex\@tempa\let\Gin@scalex\Gin@scaley\fi
 \fi
 \setlength\@tempdima{\Gin@scalex pt}%
 \setlength\@tempdimb{\Gin@scaley pt}%
 \ifdim\@tempdima>\@tempdimb
    \let\Gin@scalex\Gin@scaley
 \fi
 \ifGin@clip
  \typeout{no clipping support in Textures}%
 \fi
 \@tempdimb=1000sp%
 \setlength\@tempdima{\Gin@scalex\@tempdimb}%
 \special{#1 #2\space scaled \number\@tempdima}%
}
```

9.2 Rotation

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

```
\def\Grot@start{\special{postscript
  0 0 transform
  grestore
  matrix currentmatrix
  3 1 roll
  itransform
  dup 3 -1 roll
  dup 4 1 roll exch
  translate
  \Grot@angle\space neg rotate
  neg exch neg exch translate
  gsave}}
\def\Grot@end{\special{postscript grestore  setmatrix  gsave}}
```

9.3 Color

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

⟨color3⟩ *\def\Gin@PS@raw#1{\special{rawpostscript #1}}*
⟨/textures⟩

10 dvialw

A LaTeX 2_ε graphics driver file for dvialw, by Nelson Beebe

⟨∗dvialw⟩

10.1 Rotation

```
\def\Ginclude@eps#1{%
   \def\@tempa{!}%
   \ifx\Gin@scaley\@tempa
     \let\Gin@scaley\Gin@scalex
   \else
    \ifx\Gin@scalex\@tempa\let\Gin@scalex\Gin@scaley\fi
   \fi
   \ifGin@clip
    \typeout{no clipping support in dvialw}%
   \fi
   \special{language "PS",
      literal "\Gin@scalex\space
        \Gin@scaley\space scale",
      position = "bottom left",
      include "#1\space"}%
}
```

⟨/dvialw⟩

11 emtex

A LaTeX 2_ε graphics driver file for Eberhard Mattes' emTeX

⟨∗emtex⟩

11.1 Graphics file inclusion

```
\def\Ginclude@bmp#1{%
  \raise\Gin@req@height\hbox{\special{em:graph #1}}%
\typeout{WARNING: emtex does not permit graphics to be scaled}%
}
```

⟨/emtex⟩

12 dvilaser/ps

A LaTeX 2ε graphics driver file for Arbortext's dvilaser/ps

⟨∗dvilaser⟩

12.1 Graphic file inclusion

```
\def\Ginclude@eps#1{%
\ifGin@clip
  \typeout{no clipping support in dvilaser/ps}%
\fi
\special{ps: epsfile #1\space \the\Gin@req@width}%
}
```

⟨/dvilaser⟩

13 psprint

A LaTeX 2ε graphics driver file for Trevorrow's psprint

⟨∗psprint⟩

13.1 Graphic file inclusion

```
\def\Ginclude@eps#1{%
   \def\@tempa{!}%
   \ifx\Gin@scaley\@tempa
     \let\Gin@scaley\Gin@scalex
   \else
     \ifx\Gin@scalex\@tempa\let\Gin@scalex\Gin@scaley\fi
   \fi
   \ifGin@clip
     \typeout{no clipping support in psprint}%
   \fi
   \special{#1\space
       \Gin@scalex\space \Gin@scaley\space scale
       \Gin@llx\space neg
       \Gin@lly \space neg translate
}%
}
```

⟨/psprint⟩

14 dvipsone

A LaTeX 2ε graphics driver file for Y&Y's dvipsone

⟨∗dvipsone⟩

14.1 Graphic file inclusion

PostScript Files.

```
\def\Ginclude@eps#1{%
 \message{<#1>}%
  \bgroup
  \def\@tempa{!}%
  \dimen@\Gin@req@width
  \dimen@ii.1bp%
  \divide\dimen@\dimen@ii
  \@tempdima\Gin@req@height
  \divide\@tempdima\dimen@ii
    \special{PSfile="#1"\space
      llx=\Gin@llx\space
      lly=\Gin@lly\space
      urx=\Gin@urx\space
      ury=\Gin@ury\space
      \ifx\Gin@scalex\@tempa\else rwi=\number\dimen@\space\fi
      \ifx\Gin@scaley\@tempa\else rhi=\number\@tempdima\space\fi
      \ifGin@clip clip\fi}%
  \egroup}
```

Tiff files.

```
\def\Ginclude@tiff#1{%
\message{<#1>}%
 \special{insertimage: #1 \number\Gin@req@width\space
     \number\Gin@req@height}}
```

Windows Metafiles.

```
\def\Ginclude@wmf#1{%
  \message{<#1>}%
  \special{insertmf: #1 0 0 \number\Gin@req@width\space
       \number\Gin@req@height}}

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

14.2 Rotation

```
\def\Grot@start{%
 \special{ps: gsave currentpoint
 currentpoint translate \Grot@angle\space
 rotate neg exch neg exch translate}}
\def\Grot@end{%
  \special{ps: currentfont currentpoint grestore moveto setfont}}
```

14.3 Scaling

```
\def\Gscale@start{\special{ps:  currentpoint currentpoint translate
  \Gscale@x\space \Gscale@y\space scale neg exch neg exch translate}}
\def\Gscale@end{\special{ps:  currentpoint currentpoint translate
  1 \Gscale@x\space div 1 \Gscale@y\space div scale
  neg exch neg exch translate}}
```

14.4 File Extensions

```
\@namedef{Gin@rule@.wmf}#1{{wmf}{}{#1}}
```

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

15 Literal Postscript

Raw PostScript code, no save/restore.

```
\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 (TEX) position.

```
\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.

```
\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.

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

⟨/dvipsone⟩

16 dviwindo

A LATEX 2_ε graphics driver file for Y&Y's dviwindo.

This driver now uses the same file as `dvipsone`.

17 dvitops

A LATEX 2_ε graphics driver file for James Clark's dvitops

⟨*dvitops⟩

17.1 Rotation

```
\newcount\Grot@count
\Grot@count=\@ne
\def\Grot@start{\special{dvitops: origin
    rot\the\@tempdima}%
\special{dvitops: begin rot\the\Grot@count}}%
\def\Grot@end{\special{dvitops: end}%
\special{dvitops: rotate rot\the\Grot@count \space
    \Grot@angle}%
\global\advance\Grot@count by\@ne}%
```

17.2 Graphic file inclusion

```
\def\Ginclude@eps#1{%
% These cause an arithmetic overflow, so I've commented them
% out. Presumably they were there for some reason.
% Any dvitops users out there??
% \multiply\Gin@req@width by \@m
% \multiply\Gin@req@height by \@m
\ifGin@clip
  \typeout{no clipping support in dvitops}%
```

```
\fi
\special{import #1\space \the\Gin@req@width\space
                         \the\Gin@req@height\space fill}}
```
⟨/dvitops⟩

18 dvi2ps

A LaTeX 2ε graphics driver file for original dvi2ps

⟨∗dvi2ps⟩

18.1 Graphic file inclusion

```
\def\Ginclude@eps#1{%
   \def\@tempa{!}%
   \ifx\Gin@scaley\@tempa
     \let\Gin@scaley\Gin@scalex
   \else
    \ifx\Gin@scalex\@tempa\let\Gin@scalex\Gin@scaley\fi
   \fi
   \ifGin@clip
     \typeout{no clipping support in dvi2ps}%
   \fi
   \special{psfile=#1\space
        hscale=\Gin@scalex\space 1000 mul
        vscale=\Gin@scaley\space 1000 mul}}
```
⟨/dvi2ps⟩

19 pctexps

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

⟨∗pctexps⟩

19.1 Graphic file inclusion

```
\def\Ginclude@eps#1{%
\message{<#1>}%
   \ifGin@clip
     \typeout{no clipping support in pctexps}%
   \fi
   \Gin@req@width.03515\Gin@req@width
   \Gin@req@height.03515\Gin@req@height
   \special{ps:#1\space x=\strip@pt\Gin@req@width cm,
                         y=\strip@pt\Gin@req@height cm}}
\def\Ginclude@ps#1{%
\message{<#1>}%
  \ifGin@clip
    \typeout{no clipping support in pctexps}%
  \fi
  \hbox{\kern-\Gin@llx bp\raise-\Gin@lly bp\hbox{\special{ps:#1}}}%
  \typeout{^^J%
---------------------------------------------------------^^J%
```

```
.ps graphics without bounding box information cannot be^^J%
scaled.  If the file actually contains the information,^^J%
please rename the file to .eps file extension.^^J%
-------------------------------------------------------^^J}}
\def\Gin@extensions{.eps,.ps}
\@namedef{Gin@rule@.ps}#1{{ps}{.ps}{#1}}
\@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
\def\Gin@PS@raw#1{\special{ps::#1}}
\def\Grot@start{%
 \special{ps::gsave currentpoint
 currentpoint translate \Grot@angle\space
 rotate neg exch neg exch translate}}
\def\Grot@end{\special{ps:: currentpoint grestore moveto}}
\def\Gscale@start{\special{ps:: currentpoint currentpoint translate
  \Gscale@x\space \Gscale@y\space scale neg exch neg exch translate}}
\def\Gscale@end{\special{ps::  currentpoint currentpoint translate
  1 \Gscale@x\space div 1 \Gscale@y\space div scale
  neg exch neg exch translate}}
```

⟨/pctexps⟩

20 pctex32

A LaTeX 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 Color

Uses the generic 'color1' code.

⟨∗pctex32⟩

20.2 Graphic file inclusion

```
% including PostScript graphics
\def\Ginclude@eps#1{%
 \message{<#1>}%
  \bgroup
  \def\@tempa{!}%
  \dimen@\Gin@req@width
  \dimen@ii.1bp%
  \divide\dimen@\dimen@ii
  \@tempdima\Gin@req@height
  \divide\@tempdima\dimen@ii
    \special{PSfile="#1"\space
      llx=\Gin@llx\space
      lly=\Gin@lly\space
      urx=\Gin@urx\space
      ury=\Gin@ury\space
      \ifx\Gin@scalex\@tempa\else rwi=\number\dimen@\space\fi
      \ifx\Gin@scaley\@tempa\else rhi=\number\@tempdima\space\fi
      \ifGin@clip clip\fi}%
  \egroup}
```

including BMP graphics

```
\def\Ginclude@bmp#1{%
\message{<#1>}%
   \ifGin@clip
     \typeout{no clipping support for BMP graphics in PCTeX32}%
   \fi
   \Gin@req@width.03515\Gin@req@width
   \Gin@req@height.03515\Gin@req@height
   \special{bmp:#1\space x=\strip@pt\Gin@req@width cm,
     y=\strip@pt\Gin@req@height cm}}
```

including WMF graphics

```
\def\Ginclude@wmf#1{%
\message{<#1>}%
   \ifGin@clip
     \typeout{no clipping support for WMF graphics in PCTeX32}%
   \fi
   \Gin@req@width.03515\Gin@req@width
   \Gin@req@height.03515\Gin@req@height
   \special{wmf:#1\space x=\strip@pt\Gin@req@width cm,
     y=\strip@pt\Gin@req@height cm}}
```

20.3 Scaling and Rotating

PostScript rotation and scaling

```
\def\Grot@start{%
 \special{ps:: gsave currentpoint
 currentpoint translate \Grot@angle\space neg
 rotate neg exch neg exch translate}}
\def\Grot@end{\special{ps:: currentpoint grestore moveto}}
\def\Gscale@start{\special{ps::  currentpoint currentpoint translate
  \Gscale@x\space \Gscale@y\space scale neg exch neg exch translate}}
\def\Gscale@end{\special{ps::  currentpoint currentpoint translate
  1 \Gscale@x\space div 1 \Gscale@y\space div scale
  neg exch neg exch translate}}
\def\Gin@PS@raw#1{\special{ps:: #1}}
\def\Gin@PS@restored#1{\special{" #1}}
```

20.4 Default Extensions

```
\def\Gin@extensions{.eps,.ps,.wmf,.bmp}
\@namedef{Gin@rule@.ps}#1{{eps}{.ps}{#1}}
\@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
\@namedef{Gin@rule@.bmp}#1{{bmp}{}{#1}}
\@namedef{Gin@rule@.wmf}#1{{wmf}{}{#1}}
```

⟨/pctex32⟩

21 pctexwin

A LaTeX 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>.

⟨∗pctexwin⟩

21.1 Graphic file inclusion

```
\def\Ginclude@eps#1{%
\message{<#1>}%
   \ifGin@clip
     \typeout{no clipping support in pctexwin}%
   \fi
   \Gin@req@width.03515\Gin@req@width
   \Gin@req@height.03515\Gin@req@height
   \special{eps:#1\space x=\strip@pt\Gin@req@width cm,
                         y=\strip@pt\Gin@req@height cm}}
\def\Ginclude@ps#1{%
\message{<#1>}%
  \ifGin@clip
    \typeout{no clipping support in pctexwin}%
  \fi
  \hbox{\kern-\Gin@llx bp\raise-\Gin@lly bp\hbox{\special{ps:#1}}}%
  \typeout{^^J%
------------------------------------------------------------^^J%
.ps graphics without bounding box information cannot be^^J%
scaled.  If the file actually contains the information,^^J%
please rename the file to .eps file extension.^^J%
------------------------------------------------------------^^J%
}}
\def\Ginclude@bmp#1{%
\message{<#1>}%
   \ifGin@clip
     \typeout{no clipping support in pctexwin}%
   \fi
   \Gin@req@width.03515\Gin@req@width
   \Gin@req@height.03515\Gin@req@height
   \special{bmp:#1\space x=\strip@pt\Gin@req@width cm,
                         y=\strip@pt\Gin@req@height cm}}
\def\Ginclude@wmf#1{%
\message{<#1>}%
   \ifGin@clip
     \typeout{no clipping support in pctexwin}%
   \fi
   \Gin@req@width.03515\Gin@req@width
   \Gin@req@height.03515\Gin@req@height
   \special{wmf:#1\space x=\strip@pt\Gin@req@width cm,
                         y=\strip@pt\Gin@req@height cm}}
\def\Gin@extensions{.eps,.ps,.wmf,.bmp}
\@namedef{Gin@rule@.bmp}#1{{bmp}{}{#1}}
\@namedef{Gin@rule@.wmf}#1{{wmf}{}{#1}}
\@namedef{Gin@rule@.ps}#1{{ps}{.ps}{#1}}
\@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
```

⟨/pctexwin⟩

22 pctexhp

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

⟨*pctexhp⟩

22.1 Graphic file inclusion

```
\def\Ginclude@pcl#1{%
\message{<#1>}%
   \ifGin@clip
     \typeout{no clipping support in pctexhp}%
   \fi
   \hbox{\kern-\Gin@llx bp\raise-\Gin@lly bp\hbox{\special{pcl:#1}}}%
   \typeout{WARNING: pctexhp does not permit graphics to be scaled}}
\@namedef{Gin@rule@.pcl}#1{{pcl}{}{#1}}
\def\Gin@extensions{.pcl}
```

⟨/pctexhp⟩

23 pubps

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

⟨*pubps⟩

23.1 Rotation

```
\def\Grot@start{\special{ps: gsave currentpoint
        currentpoint translate \Grot@angle\space
        rotate  neg exch neg exch translate}}
\def\Grot@end{\special{ps: currentpoint grestore moveto}}
```

⟨/pubps⟩

24 dviwin

A LaTeX 2_ε graphics driver file for Hippocrates Sendoukas' dviwin

⟨*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.

```
\@namedef{Gin@rule@*}#1{{bmp}{}{#1}}
\def\Ginclude@bmp#1{%
  \raise\Gin@req@height\hbox{%
   \special{anisoscale #1,
   \the\Gin@req@width\space \the\Gin@req@height}}}
```

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

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

```
\def\Gin@extensions{.eps,.ps,.wmf,.tif}
```

⟨/dviwin⟩

25 ln

A LaTeX 2ε graphics driver file for B Hamilton Kelly's ln03 driver. Untested, but based on the graphics macros distributed with the driver.

⟨∗ln⟩

25.1 Graphic file inclusion

```
\def\Ginclude@sixel#1{\special{ln03:sixel #1}}
```

⟨/ln⟩

26 truetex

A LaTeX 2ε graphics driver file for Kinch 'truetex' driver.

⟨∗truetex⟩

26.1 Color

Uses the 'color4' color code.

26.2 Graphic file inclusion

EPS File inclusion: DVIPS style.

```
\def\Ginclude@eps#1{%
 \message{<#1>}%
  \bgroup
  \def\@tempa{!}%
  \dimen@\Gin@req@width
  \dimen@ii.1bp%
  \divide\dimen@\dimen@ii
  \@tempdima\Gin@req@height
  \divide\@tempdima\dimen@ii
    \special{PSfile="#1"\space
      llx=\Gin@llx\space
      lly=\Gin@lly\space
      urx=\Gin@urx\space
      ury=\Gin@ury\space
      \ifx\Gin@scalex\@tempa\else rwi=\number\dimen@\space\fi
      \ifx\Gin@scaley\@tempa\else rhi=\number\@tempdima\space\fi
      \ifGin@clip clip\fi}%
  \egroup}
```

bmp File Inclusion.

```
\def\Ginclude@bmp#1{%
 \message{<#1>}%
 \special{bmpfile #1}}
```

tif(f) File inclusion

```
\def\Ginclude@tiff#1{%
 \message{<#1>}%
 \special{tifffile #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.

```
\def\Gin@extensions{.eps,.ps}
\@namedef{Gin@rule@.ps}#1{{eps}{.ps}{#1}}
\@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
\@namedef{Gin@rule@.tif}#1{{tiff}{}{#1}}
\@namedef{Gin@rule@.bmp}#1{{bmp}{}{#1}}
\@namedef{Gin@rule@*}#1{{eps}{\Gin@ext}{#1}}
```

⟨/truetex⟩

27 tcidvi

A LaTeX 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.

⟨*tcidvi⟩

27.1 Color

Uses the 'color4' color code.

The above colors 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.

```
\AtBeginDocument{\def\color@block#1#2#3{%
  {\rlap{\ifcolors@
      \@defaultunits\count@\current@color\@nnil
      \dimen@\count@\p@
      \divide\dimen@\@cclv
      \dimen@ii#2%
      \advance\dimen@ii#3%
      \lower#3\hbox{%
      \special{language "Scientific Word";%
               type "greybox";%
               greyscale \strip@pt\dimen@;%
               height \the\dimen@ii;%
               width \the#1;%
               depth 0pt;}}%
           \fi}}}}
```

27.2 Graphic file inclusion

EPS File inclusion.

```
\def\Ginclude@eps#1{%
 \message{<#1>}%
 \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).

```
  \ifx\Gin@ollx\@undefined
  \else
    \@tempdimb \Gin@ourx bp%
    \advance\@tempdimb-\Gin@ollx bp%
    \@tempdima\Gin@llx bp%
    \advance\@tempdima-\Gin@ollx bp%
    \Gscale@div\TCI@cropleft\@tempdima\@tempdimb
    \@tempdima\Gin@urx bp%
    \advance\@tempdima-\Gin@ollx bp%
    \Gscale@div\TCI@cropright\@tempdima\@tempdimb
    \@tempdimb \Gin@oury bp%
    \advance\@tempdimb-\Gin@olly bp%
    \@tempdima\Gin@lly bp%
    \advance\@tempdima-\Gin@olly bp%
    \Gscale@div\TCI@cropbottom\@tempdima\@tempdimb
    \@tempdima\Gin@ury bp%
    \advance\@tempdima-\Gin@olly bp%
    \Gscale@div\TCI@croptop\@tempdima\@tempdimb
  \fi
    \special{%
      language \TCI@language;%
      type \TCI@type;%
      valid_file \TCI@validfile;%
      width \the\Gin@req@width;%
      height \the\Gin@req@height;%
      depth 0pt;%
      original-width \the\Gin@nat@width;%
      original-height \the\Gin@nat@height;%
      cropleft "\TCI@cropleft";%
      croptop "\TCI@croptop";%
      cropright "\TCI@cropright";%
      cropbottom "\TCI@cropbottom";%
      filename '#1';%
      \ifx\TCI@temp\@empty\else tempfilename \TCI@temp;\fi
      }}}
```

Default values so documents produced elsewhere should work

```
\def\TCI@language{"Scientific Word"}
\def\TCI@type{"GRAPHIC"}
\def\TCI@validfile{'F'}
\def\TCI@cropleft{0}
\def\TCI@croptop{1}
\def\TCI@cropright{1}
\def\TCI@cropbottom{0}
\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.

```
\let\Ginclude@bmp\Ginclude@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.

```
\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.

```
\@namedef{Gin@rule@.ps}#1{{eps}{.ps}{#1}}
\@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
\@namedef{Gin@rule@.PS}#1{{eps}{.PS}{#1}}
\@namedef{Gin@rule@.EPS}#1{{eps}{.EPS}{#1}}
\@namedef{Gin@rule@*}#1{{bmp}{\Gin@ext}{#1}}
⟨/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.

```
⟨*nops⟩
```

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

```
\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.

```
\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.

```
\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.

```
\def\Gin@PS@file@header#1{}
⟨/nops⟩
```

29 Graphics Inclusion Rules

852 ⟨*psrules⟩

853 \def\Gin@extensions{.eps,.ps}

854 \@namedef{Gin@rule@.ps}#1{{eps}{.ps}{#1}}
855 \@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}

856 \@namedef{Gin@rule@*}#1{{eps}{\Gin@ext}{#1}}

857 ⟨/psrules⟩
858 ⟨*psrulesZ⟩

859 \def\Gin@extensions{.eps,.ps,.eps.gz,.ps.gz,.eps.Z,.mps}

860 \@namedef{Gin@rule@.ps}#1{{eps}{.ps}{#1}}
861 \@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
862 \@namedef{Gin@rule@.mps}#1{{eps}{.mps}{#1}}
863 \@namedef{Gin@rule@.pz}#1{{eps}{.bb}{#1}}
864 \@namedef{Gin@rule@.eps.Z}#1{{eps}{.eps.bb}{#1}}
865 \@namedef{Gin@rule@.ps.Z}#1{{eps}{.ps.bb}{#1}}
866 \@namedef{Gin@rule@.ps.gz}#1{{eps}{.ps.bb}{#1}}
867 \@namedef{Gin@rule@.eps.gz}#1{{eps}{.eps.bb}{#1}}

868 \@namedef{Gin@rule@*}#1{{eps}{\Gin@ext}{#1}}

869 ⟨/psrulesZ⟩
870 ⟨*dosrules⟩

871 ⟨!psrulesZ⟩*\def\Gin@extensions{.eps,.ps,.pcx,.bmp}*

872 \@namedef{Gin@rule@.pcx}#1{{bmp}{}{#1}}
873 \@namedef{Gin@rule@.bmp}#1{{bmp}{}{#1}}
874 \@namedef{Gin@rule@.msp}#1{{bmp}{}{#1}}

875 ⟨/dosrules⟩
876 ⟨*macrules⟩
877 %\def\Gin@extensions{{},.ps,.eps,.pict}
878 %\@namedef{Gin@rule@.ps}#1{{eps}{.ps}{#1}}
879 %\@namedef{Gin@rule@.eps}#1{{eps}{.eps}{#1}}
880 \@namedef{Gin@rule@.pict}#1{{pict}{}{#1}}
881 \@namedef{Gin@rule@.pntg}#1{{pntg}{}{#1}}
882 %\@namedef{Gin@rule@}#1{{pict}{\relax}{#1}}
883 ⟨/macrules⟩
884 ⟨*tiffrules⟩
885 \@namedef{Gin@rule@.tif}#1{{tiff}{}{#1}}
886 ⟨/tiffrules⟩