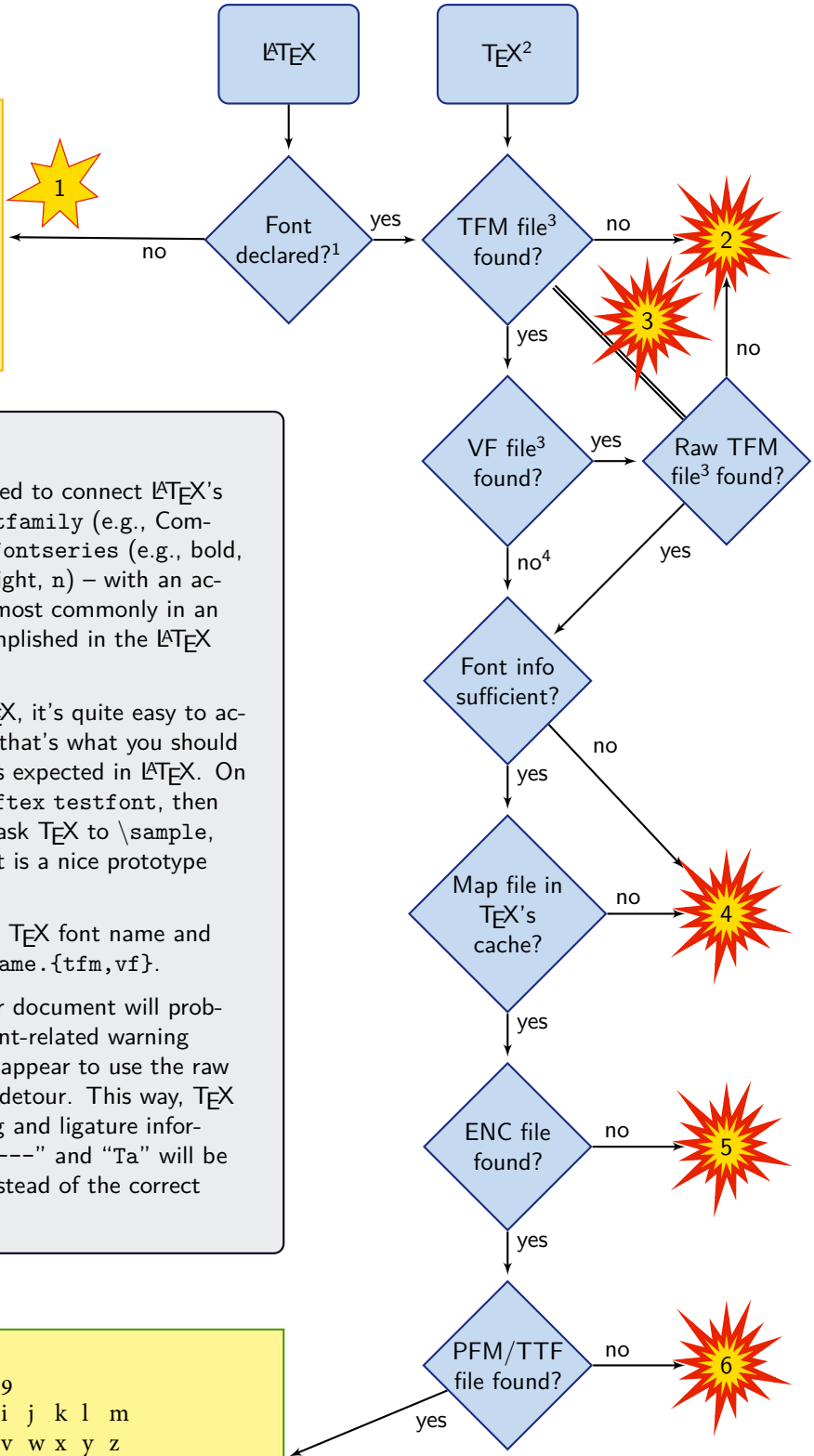
TEX font errors: Cheatsheet



An output file with a fallback font (usually `cmr`) will be generated .

0 1 2 3 4 5 6 7 9
a b c d e f g h i j k l m
n o p q r s t u v w x y z
A B C D E F G H I J K L M
N O P Q R S T U V WX Y Z

Done!

0 1 2 3 4 5 6 7 9
a b c d e f g h i j k l m
n o p q r s t u v w x y z
A B C D E F G H I J K L M
N O P Q R S T U V WX Y Z

Depending on whether or not your TFM/VF file contains kerning and ligature tables, the quality of your document might vary (see note [4]). Compare, for example,

Table	Table
ffi	ffi
—	---
¿	?‘

Notes

1. To use a font in LATEX, you need to connect LATEX's font definition – given as `fontfamily` (e.g., Computer Modern Roman, `cmr`), `fontseries` (e.g., bold, `b`), and `fontsshape` (e.g, upright, `n`) – with an actual TEX font. This happens most commonly in an FD file, but can also be accomplished in the LATEX source file itself.
2. Even if you're not fluent in TEX, it's quite easy to actually test a font with it, and that's what you should do if things are not working as expected in LATEX. On the command line, just go `pdftex testfont`, then give your font's (TEX) name, ask TEX to `\sample`, and say `\bye`. What you'll get is a nice prototype document of your font.
3. Your font definition declares a TEX font name and TEX looks for `[r]TeX-font-name.{tfm,vf}`.
4. If no further errors occur, your document will probably compile fine without a font-related warning message at all. However, you appear to use the raw TFM directly without the VF detour. This way, TEX will not have access to kerning and ligature information; hence, for example, "`---`" and "`Ta`" will be rendered as "---" and "Ta" instead of the correct "—" and "Ta".

Errors and warnings as given by TEX

The following error messages were generated with the TTF font Comic Sans in LATEX. The TEX font name was chosen to be `jcs` and T1 encoding was used.


```
LaTeX Font Warning: Font shape ‘OT1/jcs/m/n’ undefined
(Font)              using ‘OT1/jcs/m/n’ instead on input line 23.
```

If you select the font explicitly by

```
\fontfamily{jcs}\fontseries{m}\fontshape{n}\selectfont Sample text.
```

you might run into the same issue. The problem is that LATEX can't find a definition (in an FD file or in the source file itself) that links the font family `jcs` with series `m` and shape `n` *and the current encoding* to a specific internal TEX font.
That said, the problem is mostly the encoding. Are you using

```
\DeclareFontFamily{T1}{jcs}{}
\DeclareFontShape{T1}{jcs}{m}{n} {<-> jcsr8t } {}
```

that is, T1 encoding? Well, LATEX's default is OT1, so it's probably just enough to force T1 encoding in your source file with

```
\usepackage[T1]{fontenc}
```


```
kpathsea: Running mktextfm jcsr8t
mktextfm: Running mf-nowin -progname=mf \mode:=ljfour; mag:=1; nonstopmode;
input jcsr8t
This is METAFONT, Version 2.718281 (Web2C 7.5.7)


kpathsea: Running mktexmf jcsr8t
! I can’t find file jcsr8t’.
<*> ...=ljfour; mag:=1; nonstopmode; input jcsr8t

Please type another input file name
! Emergency stop.
<*> ...=ljfour; mag:=1; nonstopmode; input jcsr8t

Transcript written on mfput.log.
grep: jcsr8t.log: No such file or directory
mktextfm: ‘mf-nowin -progname=mf \mode:=ljfour; mag:=1; nonstopmode; input jcsr8t’
failed to make jcsr8t.tfm.
kpathsea: Appending font creation commands to missfont.log.

! Font T1/jcs/m/n/10=jcsr8t at 10.0pt not loadable: Metric (TFM) file not found.
<to be read again>
                   relax
```

Now, somewhere in TEX's data (in an FD file corresponding to your font or in the source file), one of TEX's internal font names is specified, (like `jcsr8t` here). Unfortunately, TEX can't find a file named `jcsr8t.tfm` now; you can verify this with

```
$> kpsewhich jcsr8t.tfm
```

which doesn't give any location. *This file is needed to use the font.* If you are sure that the file is there, update TEX's cache (`texhash`).


```
! TeX capacity exceeded, sorry [max level recursion of virtual fonts=10].
```

This error message arises when there is a TFM file and a VF file that points to a raw TFM file that happens to be the original TFM file itself. From there, TEX finds the corresponding VF file again and so on: happy looping until TEX is tired.
There probably was an error when creating the font files which resulted in not distinguishing raw TFM and TFM file. If you created the font files yourself, make sure that *these are actually different files*.


```
kpathsea: Running mktexpk --mfmode / --bdpi 600 --mag 0+420/600 --dpi 420 rjcsr8t
mktexpk: don't know how to create bitmap font for rjcsr8t.
kpathsea: Appending font creation commands to missfont.log.

!pdfTeX error: pdflatex (file rjcsr8t): Font rjcsr8t at 420 not found
 ==> Fatal error occurred, no output PDF file produced!
```

Probably the most common error message in LATEX fonts.
It's being triggered when the information in the (raw) TFM file is not sufficient to create the actual font, and thus again is a font installation error.

- Check that you did not interchange raw TFM and TFM font file (the raw TFM file should be a lot smaller).
- Check that TEX finds your VF file if there is one.

Another possible cause is that the raw TFM is declared in no MAP file, or that TEX's map cache isn't updated. Look for a map file with an entry starting with the raw TFM name, for example,

```
rjcsr8t Comic-Sans " T1Encoding ReEncodeFont " <Comic-Sans.ttf
   <T1-WGL4.enc
```

In Linux, this could for example be done by

```
$> find /path/to/mapfiles | xargs grep rjcsr8t
```

If you can't find it, create a proper map file, and update TEX's map cache:

```
$> updmap --enable Map=/path/to/mapfile.map
```


```
!pdfTeX error: pdflatex (file T1-WGL4.enc): cannot open encoding file for reading
 ==> Fatal error occurred, no output PDF file produced!
```

Probably easy: LATEX can't find the encoding file. Can you? In this case, you probably forgot to update TEX's cache:

```
$> texhash
```


```
!pdfTeX error: pdflatex (file Comic-Sans.ttf): cannot open TrueType font file
for reading
 ==> Fatal error occurred, no output PDF file produced!
```

The actual font file appears to be missing. Again, this might be a matter of updating TEX's cache; also make sure that the user can actually access the font file (read: get file permissions right).