## NAME

mmpfb - creates single-master fonts from multiple master fonts

## SYNOPSIS

mmpfb [OPTIONS...] font

## DESCRIPTION

Mmpfb creates a normal, single-master PostScript font from a multiple master font by interpolation. You pass it a PFB or PFA font and options specifying the design point you want; it writes the resulting PFB or PFA font to the standard output.

The fonts mmpfb creates are interpolated at a low level to remove multiple master instructions from individual characters. Therefore, they can be used by programs that don't normally understand multiple master fonts, like $\mathbf{p s} 2 \mathbf{p k}(1)$.

Mmpfb supports fonts with intermediate masters, like Adobe Jenson and Kepler. It can also create AMCP (Adobe Multiple Master Conversion Program) files for use by mmafm(1); see --amcp-info below.

The font argument is either the name of a PFA or PFB font file, or a PostScript font name. If you give a font name, mmpfb will find the actual outline file using the PSRESOURCEPATH environment variable. This colon-separated path is searched for 'PSres.upr' files, an Adobe method for indexing PostScript resources.

You can also give the name of a multiple master font instance, like 'MinionMM_367_400_12_'. Mmpfb will parse the font name and create that instance for you. 'PSres.upr' files must be set up for this to work.

## EXAMPLE

$$
\% \text { mmpfb --weight=400 --width=600 MyriadMM.pfb > MyriadMM_400_600_.pfb }
$$

## OPTIONS

Long options may be abbreviated to their unique prefixes.
--output=file, -o file
Send output to file instead of standard output.
$--\mathbf{p f b},-b$
Output a PFB font. This is the default.
--pfa, -a
Output a PFA font.
--amcp-info
Do not create a font; instead, output an AMCP file for use by mmafm(1). A message is printed if the font doesn't have intermediate masters, in which case no AMCP file is necessary.
--weight $=N$, -w $N$
Set the weight axis to $N$.
--width $=N,-\mathbf{W} N$
Set the width axis to $N$.
--optical-size= $N, \mathbf{- O} N$
Set the optical size axis to $N$.
--style $=N$
Set the style axis to $N$.
$\mathbf{-} \mathbf{1}=N(-\mathbf{2}=N, \mathbf{- 3}=N,-\mathbf{4}=N)$
Set the first (second, third, fourth) axis to $N$.
--precision $=N,-\mathbf{p} N$
Set the output precision to $N$. Higher values mean the control points in the output font will be more exactly aligned; lower values ( 1 or 2 ) create smaller output font files, and are close enough for most purposes. A precision of $N$ means that each point will be within $1 / N$ font units of the exact interpolated value. (A font unit is generally $1 / 7200$ inch for a 10 -point font.) The default is 5 .
--subrs= $N$
Limit the output font to at most $N$ subroutines. 256 is a good value for $N$.
--no-minimize
Do not minimize the output font definition. By default, mmpfb removes extra PostScript code and dictionary definitions from the font. Supply the --no-minimize option to avoid this behavior.

## TROUBLESHOOTING

The "IBM" Type 1 font interpreter shipped as part of the X font server and $\mathbf{p s} 2 \mathbf{p k}$ (among others) is inappropriately strict about PostScript code embedded in a font. The --minimize option (now the default) fixes this problem.
Some versions of Adobe Acrobat Distiller may report "Warning: unable to embed font X. Invalid character outline data" when distilling an instance generated by mmpfb. This is due to a limitation in the number of font subroutines Distiller can accept. (Multiple master fonts, and the singlemaster fonts generated by mmpfb, tend to have a lot of subroutines.) Try limiting the number of subroutines in the generated font with the --subrs option.
SEE ALSO

```
    mmafm(1)
```


## DIAGNOSTICS

reducing font to minimum number of subroutines $(N)$
You tried to reduce the number of subroutines to less than $N$ using the --subrs option, but the font needs at least $N$ to function. The output font will have $N$ subroutines.

## AUTHOR

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The latest version is available from:
http://www.lcdf.org/type/
Thanks to Melissa O'Neill for suggestions and patient debugging.

