- Postscript
- TIFF
- CGM
- Gerber

Customizing Your Plot Configuration File

Plot configuration files are used to configure the PLOT and PUBLISH functions and the CATPLOT and CATPUB utilities, all of which provide the link with CATIA. These files determine the number of plotters that you can access through the PLOT and PUBLISH or CATPLOT and CATPUB end-user interface; there is one file per plotter. Each of these files defines a "Logical Plotter", and links it to a specific plotter language. It is generally related to a physical plotter.

The list of plotters or printers supplied interactively to the user is built from the contents of the directories declared in your declaration file with the CATIA.PLOT_CFG parameter.

These directories contain files with the .plot_cfg suffix. Each file contains data defining CATIA plotting parameters.

In your declaration file, you should always have one instruction similar to the following:

```
alias CFGPLT01 = CATIA.PLOT_CFG = '$HOME/db/pltcfg';
```

CATIA supplies sample plot configuration files in the /home/catadm/adm/plot directory. According to your needs and the plotters to which you have access, you can copy the samples in $CAT_ADM/plot to your own plotter configuration directory (for example $CAT_ADM/pltcfg).

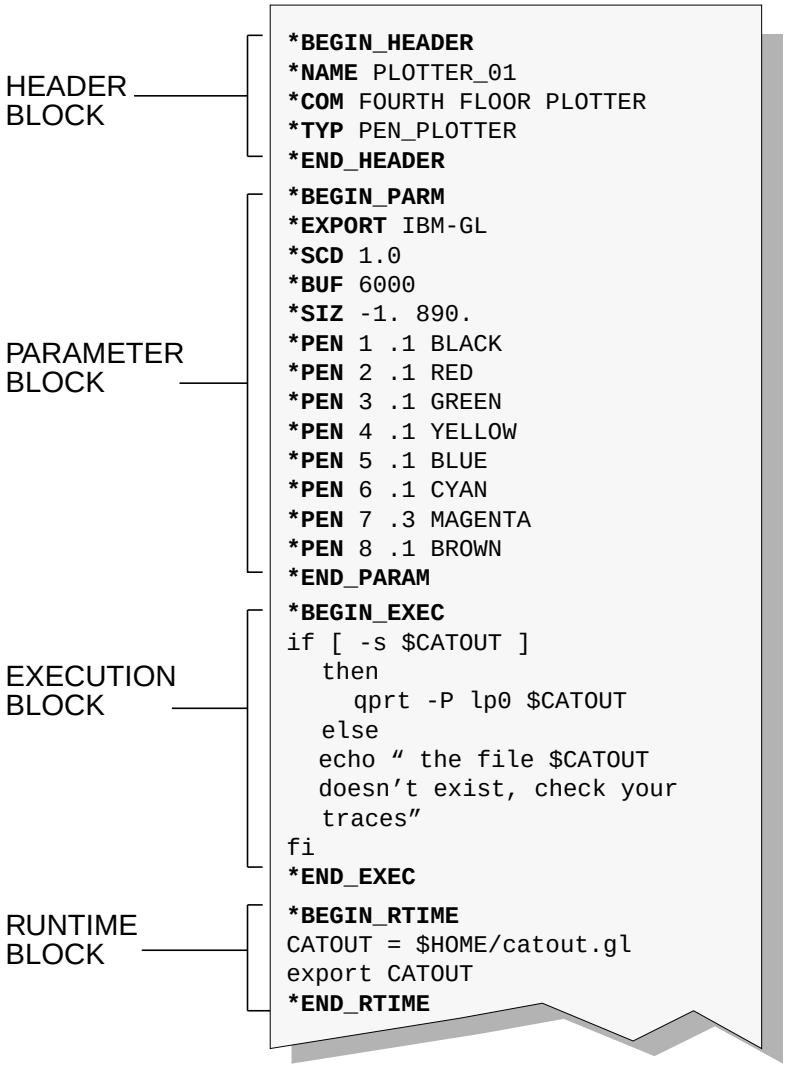
The default sample files (matching the plotter languages supported by CATIA) are:

- PLOT0001.plot_cfg (IBM-GL pen plotter)
- PLOT0002.plot_cfg (HP-GL/2 plotter)
- PLOT0003.plot_cfg (VDF-GL pen plotter)
- PLOT0004.plot_cfg (VRF or VCGL electrostatic plotter)
- PLOT0005.plot_cfg (907/PCI pen or electrostatic plotter)
- PLOT0006.plot_cfg (mixed HP-GL/ 2 and HP/RTL plotter)
- PLOT0100.plot_cfg (PostScript printer)
- PLOT0101.plot_cfg (CGM plotter)
- PLOT0103.plot_cfg (Gerber plotter)

- PLOT0104.plot_cfg (TIFF plotter)

Note: The configuration files for PostScript printers, CGM, Gerber and TIFF plotters will only be installed and can only be used if the CATIA Publishing product is installed.

Here is an example of a plot configuration file. Its contents are explained in subsequent sections.



The configuration files break down into the following parts, specifying the following information:

- header (information for the end-user interface)
- parameters (plotter characteristics)
- execution (command to send device format to the plotter)
- runtime (export shell variables, remove old files, etc.).

The Header Block

The header block definition is delimited by the *BEGIN_HEADER and the *END_HEADER keywords. In this block, you can name your plotter (*NAME keyword) or provide a 45-character comment, and indicate whether you are using a pen or electrostatic plotter (*COM and *TYP keywords). This information is displayed in the plotter selection panel of the PLOT and PUBLISH functions and CATPLOT and CATPUB utilities.

***NAME** Name of the plotter. Specify a name according to your standards with a maximum of 10 characters. Remember to use underscore as blank characters are not allowed.

***COM** Comment for the plotter. Provide a comment based on your standards with a maximum of 45 characters.

You can mix uppercase and lowercase characters for the name and comment.

***TYP** Type of the plotter.

There are three possible types:

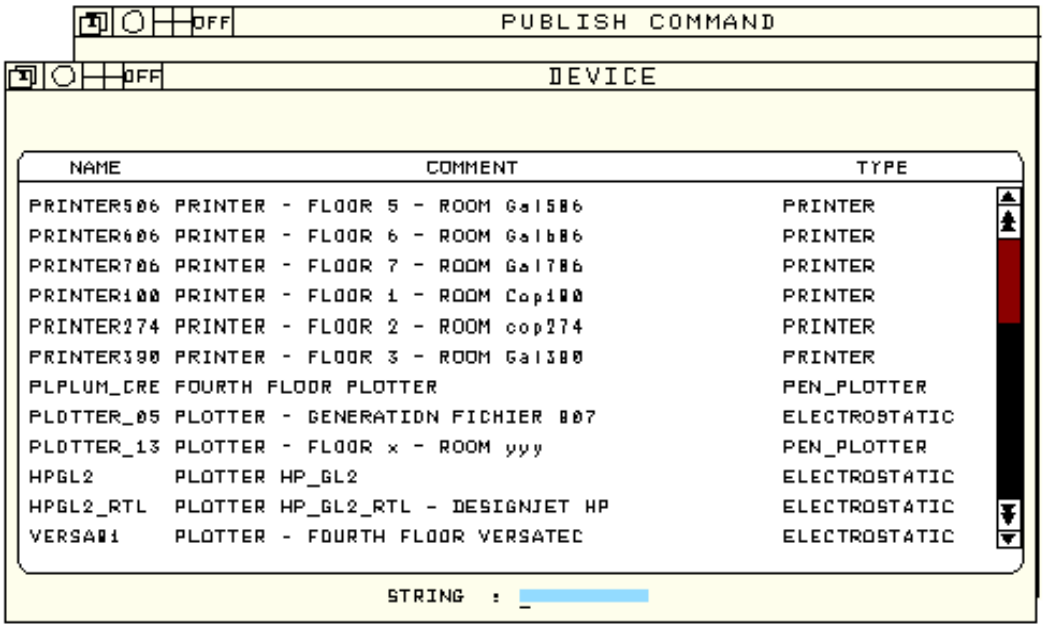
- Electrostatic
- Pen Plotter
- Printer.

The type is **not** defined by this *TYP keyword. The *TYP keyword can be set to ELECTROSTATIC, PEN_PLOTTER or PRINTER and is an information keyword used only for displaying the associated information on the screen when end users list plotters when using the different plotting and printing tools.

The type of your plotter is: **Electrostatic** if using the *NBP keyword, **Pen Plotter** if using *PEN keyword and **Printer** in other cases (the PRINTER type is to be used for PostScript output, and corresponds to a special Electrostatic format, optimized for PostScript Format).

The following example shows the relationship between what you set up in the header block and what you will see in the different plotting and printing plotter selection dialog boxes:

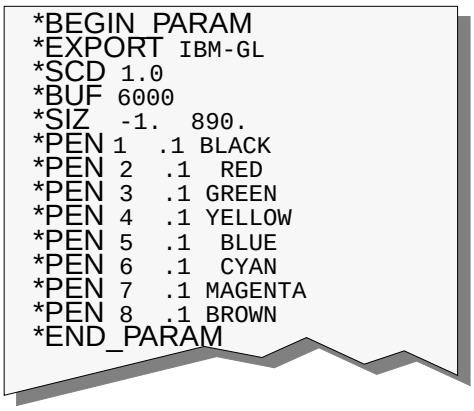
```
*BEGIN_HEADER
*NAME PLOTTER_01
*COM FOURTH FLOOR PLOTTER
*TYP PEN_PLOTTER
*END_HEADER
```



The Parameter Block

In this part of the configuration file, you specify values for parameters specific to your plotting such as output format, scale or colors and thickness associated to pens (if any).

The parameter block definition is delimited by the *BEGIN_PARAM and the *END_PARAM keywords. In this block, use the pen or electrostatic plotter keywords to define plotter characteristics.



This parameter block with specific keywords and associated values is an example. The keywords you are allowed to use in this part of the configuration file depend on your type of plotter. Nevertheless, there is a minimum number of keywords you should use for any plotter type.

Keyword	Plotter type	Used to
*EXPORT	All	Define the plotter language. Valid values are: • IBM-GL for IBM_GL • HPGL for HP_GL2 • HP_GL_RTL for mixed HP-GL2 and HP/RTL • OCEL for VDF • VGSL for VCGL and VRF • C907 for 907/PCI • DEVICE for your own plot drivers. In this case (and only in this case), use *LIB to define the plotting driver load module
*SCD	All	Specify a coefficient in order to map millimeters to the unit of your output device. For example, if your plotter device unit is the centimeter, the value of the coefficient must be 0.1 (because 1mm is equal to one tenth of 1cm). Then, in this particular case, you should indicate in your parameter block: *SCD 0.1

*BUF	All	Adapt the size of the storage area of the plotter. The storage area size is four times the value you specify. If you specify 6000 (the default value), the storage area will be 24 000 bytes. Exceeding this value could lead to unpredictable results.
*SIZ	All	Define the physical limits of the plotter in millimeters and along the X and Y axes. As a drum plotter has no limit along the X axis, you can use a value of -1.
*PEN	Pen plotter	Define for each pen identified by its number the thickness (in millimeters) and the color. A maximum of 32 pens is possible and available color are: BLACK, BLUE, BROWN, CYAN, MAGENTA, RED and YELLOW.
*NPI	Electrostatic	Indicate the density in points per inch, that is for each virtual pen the thickness. A density of 200 sets a minimum pen thickness of 0.127mm(25.4 divided by 200). Therefore, the thickness for pen 1 will be 0.127mm, the thickness for pen 2 will be 0.254mm.
*RAN	Electrostatic	Define the number of colors which can be defined in the plotter. Refer to your plotter documentation for maximum values.
*NBP	Electrostatic	Define the maximum number of virtual pens. The higher the number is, the easiest it will be to plot lines of varying thickness.

Note: Note that the use of certain keywords also determines the plotter type:

- if you use *PEN keyword, the plotter type will switch to “Pen plotter” even if the *TYP keyword is set to “Electrostatic”
- if you use one of the keywords *NPI, *RAN, *NBP, the plotter type will switch to “Electrostatic”, even if the *TYP keyword is set to “Pen plotter”.

The Execution Block

The execution block definition is delimited by the *BEGIN_EXEC and the *END_EXEC keywords.

In between the *BEGIN_EXEC and *END_EXEC keywords, a shell script lets you specify the command used to print the plot (lp, lpr, qprt, ... depending on your system), and the printer queue (lp0

in our example above). You defined the print queue in "How To Declare Your Plotter to Your UNIX System" on page 12. Do not enter other information in the shell script (comments, etc.).It also sends a message if problems occur.

```
*BEGIN_EXEC
if [ -s $CATOUT ]
 then
    qprt -P lp0 $CATOUT
 else echo "the file $CATOUT
   doesn't  exist,
   check your traces"
fi
*END_EXEC
```

To customize this block, you must have a minimum knowledge of the shell syntax.

You may insert any shell command that you want to execute during plot submission:

- before sending to the plotter
- after sending to the plotter.

The shell you write in this part uses as parameters of the shell variable $CATOUT (or other variables specific to PCI, VCGL and VRF drivers) defined in the runtime block and the print queue associated with your plotter.

The Runtime Block

In this part of the configuration file, you define the shell variables to use in the execution block. This shell variable allows you to define your output file name. The output file is the metafile which will be generated and which contains the graphic data in the plotter language you have selected. This is the actual file sent to the plotter for printing.

The runtime block definition is delimited by the *BEGIN_RTIME and the *END_RTIME keywords.

```
*BEGIN_RTIME
$CATOUT=$HOME/catout.gl
export CATOUT
*END_RTIME
```

You may specify any shell command that you wish to execute before plot submission.

These driver output file names shall be located in the runtime block definition of the corresponding plotter configuration file and are supplied in the sample plotter configuration files.

Defining Output File Names and Output Parameter Files

The table below defines all **output file names** and **variables** for each driver.

Note that for certain plotter drivers, namely 907/PCI, VCGL and VRF, the plotter vendor provides additional **output parameter files** (containing runtime parameters) which are also included in CATIA. These files are simply referenced using special variables in the runtime block for each driver concerned.

The files provide a variety of driver customization possibilities related to the physical plotter you installed. For example, the parameter file can, in certain cases, be customized to match certain settings (dpi, black and white or color printing) used for plotter optimization. In this case, a value for a runtime parameter overrides the vendor default value for that parameter.

The parameter file is device-dependent. While not defined in the CATIA documentation, the keywords relative to each parameter file are defined within the parameter file itself. You should refer to the plotter vendor documentation for further details.

For example, you must use the prmfil.dat parameter file to select the device format you want to generate (VRF or VCGL).

With the prmfil.dat file, you are provided with the capability to override the default run-time parameters values when using the VGS (Versatec Graphics Software). This file must be used to specify the plotter model and the output driver types. If you have to work with several plotters, you need as many prmfil.dat files as there are plotters.