

DataCAD Batch Plot Scripting

(For DataCAD 10.01 and Later)

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Introduction

Beginning with DataCAD Version 10.01, you can configure batch plot session files or “scripts.” This allows you to create script files that Batch Plot can read and act on to perform most plotting functions completely unattended.

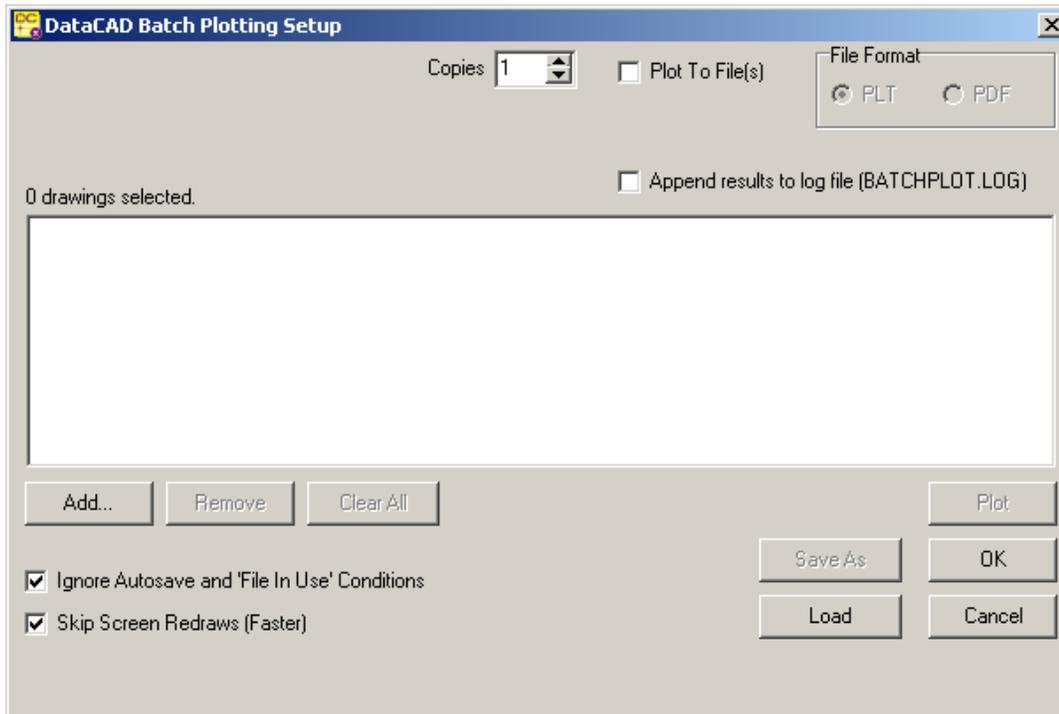
In general, it is very easy to create a batch plot session using DataCAD’s Batch Plotting Setup dialog box, in conjunction with the ability to save each drawing file with settings indicating which views and/or sheets are to be plotted. By contrast, batch plot scripting is a relatively complex and tedious function if you type a batch plot script for every drawing and/or project that is to be batch plotted. You can generate batch plot scripts from a program or applet you create. This is how Batch Plot Scripting has been used in the past by large DataCAD firms.

Script File Naming

Batch plot script files can be named any valid Windows file name, using up to 88 characters. We recommend you use the .SET extension so that you can select your file from DataCAD’s Batch Plotting Setup dialog box with the Load command.

Script File Loading and Executing

You can load a properly formatted batch plot script file by opening DataCAD and clicking Cancel to avoid loading a drawing. Then select Batch Plot from the File pull-down menu. The Batch Plotting Setup dialog box appears. Select Load from the Batch Plotting Setup dialog box and choose the desired script file. Multiple script files can be loaded to make a single batch plot session. Once the scripts are loaded, you just click on the Plot button in the Batch Plotting Setup dialog box.



Script File Format - First Line

The first line of a batch plot script **must** contain the following string exactly as shown. If you do not use this first line, DataCAD will not recognize it as a valid batch plot script file and you will receive an error when attempting to load the script.

```
DCPLOT Project Plot File Version 1.0
```

Script File Format – Remaining Lines

After the mandatory first line, a batch plot script file contains any number of the following three types of lines of text:

1. Comments
2. Blank lines
3. Plot commands

Blank lines are not considered command lines; any number of blank lines are allowed. The same goes for comments; comment lines begin with a semicolon.

Plot command lines begin with the word DCPLOT, followed by the name of the file to be plotted, and any plot options for that file. The plot command syntax and available options are described in detail in this technical bulletin.

Sample Script #1

In this simple script, there are examples of all four types of lines.

```
DCPLOT Project Plot File Version 1.0

; This is a sample batch plotting script.
; The line at the top of this file MUST BE EXACTLY AS IT IS HERE
; or DataCAD will not read the file any further.

DCPLOT "C:\MY DRAWINGS\FLOOR PLAN.DC5"

DCPLOT "C:\MY DRAWINGS\Electrical Plan.DC5"
```

This script plots two drawing files. Since no other plotting options (described later) are specified, these drawings will be plotted using the current QuickLayout. As with “regular” DataCAD batch plotting, if there are any errors within the drawing files (such as they have not been set up for plotting), the session will fail for that drawing and an error will be reported in the *Batch Plotting Session* window.

In this sample script, notice that:

- The drawing file name is fully specified (path + file name + extension).
The full file name is always required.
- The file name is completely enclosed in double quotes.
*Double quotes around the name are technically only necessary if there are spaces in the filename. However, to reduce the possibility of scripting errors, we recommend that you **always** use double quotes around the file name.*

Sample Script #2

```
DCPLOT Project Plot File Version 1.0

DCPLOT "C:\MY DRAWINGS\FLOOR PLAN.DC5" /F+
DCPLOT "C:\MY DRAWINGS\SITE PLAN.DC5" /F
DCPLOT "C:\MY DRAWINGS\Electrical Plan.DC5" /PDF
```

This example shows three plot command options: /F, /F+, and /PDF. All options on the plot command line start with the forward slash character. The three options illustrated here are:

1. /F+: This tells DataCAD to plot this drawing and send the output to a plot file. The plot file is given the same name as the drawing file, with the addition of a text descriptor for what was plotted, such as:

FLOOR PLAN - Quick Layout.PLT

The file is output to the currently configured path that DataCAD is using for plot files. This folder location can be changed with the OUTPUTFOLDER option, described later.

2. /F: Same as /F+, except the plot file name will not have the additional text descriptor. So the resulting plot file name would be:

SITE PLAN.PLT

3. /PDF: This tells DataCAD to send this drawing output to Adobe Acrobat PDF format. The same naming and folder location conventions apply as in the /F+ option. In this case, a file would be generated in the currently configured plot file folder and be named:

Electrical Plan - Quick Layout.PDF

Plot Command Syntax and Options Reference

The examples introduced how to construct a script file. In this section, we illustrate the syntax of a plot command line and the plethora of options you can use to control both *what* is plotted and *where* it goes.

Plot Command Syntax

The generic syntax for a plot command within a batch plot script is:

```
DCPLOT "drawing file name" [/option1 /option 2 /option3 ...]
```

The command must start with DCPLOT, followed by the full path and file name of the file to be plotted, preferably enclosed in double quotes. Following the file name are the options. You can have either no options at all or any number of them. Plot commands are not case-sensitive, so you can use any combination of upper and lower case letters for either commands, options, or values.

Plot Command Options

Here is a complete alphabetical list of the plot command options. All options start with a forward slash character (/). Some options (such as /F for plot to file) do not specify a value; other options do (such as /V to plot a 2D GoToView). If an option specifies a value, type a colon (:) before the value. For instance, the option to plot 2DGoToView number 3 would be: /V: 3

Most options have an abbreviation as well as a full name. For example, the /LINEWEIGHT option can be abbreviated as /LW. Any abbreviations for an option are noted in the description of the option.

2D GoToView Option – By View Name

Syntax: /VN:*name*
 (*name* is a string value)

Description: The 2D GoToView – By View Name option lets you specify one or more saved 2D views that are to be plotted using the name of the GoToView. Any or all of the ten saved 2D views may be specified by using the /VN:*name* option several times.

Example:

```
DCPLOT Project Plot File Version 1.0
; Plot 2D GoToView Named 'Elect'
DCPLOT "C:\MY DRAWINGS\FLOORPLAN.DC5" /VN:Elect

; Plot 2D GoToViews Named 'Plumb' and 'Floor'
DCPLOT "C:\MY DRAWINGS\FLOORPLAN2.DC5" /VN:Plumb /VN:Floor
```

2D GoToView Option – By View Number

Syntax: /V2:*n...n*
 (*n...n* is one or more single-digit integer values)

Description: The 2D GoToView – By View Number option lets you specify one or more saved 2D views that are to be plotted. Any or all of the ten saved 2D views may be specified by using /V: followed by the view number(s). Since you can only use one number to specify a 2DgoToView value, you use zero to indicate the number 10.

Example:

```
DCPLOT Project Plot File Version 1.0
; Plot 2D GoToViews 1, 3, 5 and 10
DCPLOT "C:\MY DRAWINGS\FLOORPLAN.DC5" /V:1350

; Plot Just 2D GoToView 10
DCPLOT "C:\MY DRAWINGS\FLOORPLAN2.DC5" /V:0
```

3D GoToView Option

Syntax: /V3:*name*
 (*name* is an string value)

Description: This allows you to specify a saved 3D view. That named view will be brought up and plotted using the current QuickLayout. If that view is not found in the drawing, you will see an error on the Batch Plot Session screen. You can specify multiple /V3 options on the plot command line to plot more than one 3D GoToView.

Example:

```
DCPLOT Project Plot File Version 1.0
; Plot 3D GoToView named 'Overall'
DCPLOT "C:\MY DRAWINGS\FLOORPLAN.DC5" /V3:Overall

; Plot 3D GoToViews named 'Elec' and 'Plumb'
DCPLOT "C:\MY DRAWINGS\FLOORPLAN2.DC5" /V3:Elec /V3:Plumb
```

Keyboard Macro Option

Syntax: /K:*N*
 (*N* is an uppercase letter)

Description: This executes a keyboard macro prior to sending the plot. This lets you customize one more level of plot environment; however, we cannot guarantee that all user-defined keyboard macros will be successfully executed with expected results. We recommend that you test the desired keyboard macro sequence to make sure it works with this option.

Example:

```
DCPLOT Project Plot File Version 1.0
; Executes the Alt-Q keyboard macro prior to plotting each of the file's internally
; saved views and/or sheets, and/or QuickLayout
DCPLOT "C:\MY DRAWINGS\FLOORPLAN.DC5" /INTERNAL /K:Q
```

Line Weight Option

Syntax: /LW:*n* or LINEWEIGHT:*n*
 (*n* is an integer value of either 0 or 1. 0=off, 1=on)

Description: This turns line weight display on or off, based on the value of *n*. Line weight is turned on if *n*=1 or off if *n*=0. If you do not specify the line weight option, the current line weight display setting in the drawing is left as is.

Example:

```
DCPLOT Project Plot File Version 1.0
; This drawing will be plotted with line weight turned OFF
DCPLOT "C:\MY DRAWINGS\FLOORPLAN.DC5" /LW:0

; This drawing will be plotted with line weight turned ON
DCPLOT "C:\MY DRAWINGS\SITE PLAN.DC5" /LW:1
```

Load Layer File Option

Syntax: /LF:*filename* or LAYERFILE:*filename*
 (*filename* is the name of a layer file on disk, specified by its drive (or network UNC) name, path, file name, and extension)

Description: You can specify one or more layer files into the drawing prior to plotting. We recommend that you enclose the layer file name in double quotes. To specify more than one layer file, simply use the Load Layer option multiple times in the command. Any layer files that are loaded will be turned on prior to plotting, even if you specified that a GoToView be plotted.

Example:

```
DCPLOT Project Plot File Version 1.0
; This example shows the loading of a layer file prior to the drawing being plotted.
DCPLOT "C:\MY DRAWINGS\FLOORPLAN.DC5" /LF:"C:\MY LAYERFILES\TITLEBLOCK.LYR"
```

Load Pen Table Option

Syntax: /PT:*name* or /PENSET:*name*
 (*name* is a string value)

Description: You can load a pen table by *name*. Using the extension (.PEN) is optional. DataCAD searches the pen table file in two locations in the following order:

1. If the full path name to the pen file is given, then that file is loaded.
2. The typical location for pen files (DataCAD's "Support files" folder) is searched for a pen file by that name. If that name is found, that pen file is loaded.

If both of these searches fail, then an error is reported in the Batch Plot Session window and the drawing will not be plotted.

Example:

```
DCPLOT Project Plot File Version 1.0
; Plot 2D GoToView Named 'Elect', using pen table file called 'My Favorite Pen Table'
DCPLOT "C:\MY DRAWINGS\FLOORPLAN.DC5" /VN:Elect /PT:"My Favorite Pen Table"

; Plot 2D GoToView Named 'Plan', using pen table file called 'Sepia' that is in the
; "C:\My Pen Tables" folder
DCPLOT "C:\MY DRAWINGS\FLOORPLAN2.DC5" /VN:Elect /PT:"C:\My Pen Tables\Sepia"
```

OutputFolder Option

Syntax: /OF:*foldername* or /OUTPUTFOLDER:*foldername*
 (*foldername* is the name of a folder, specified by its drive (or network UNC) name and path)

Description: You can specify the folder to which plot files (with the /F+ or /F option) or PDF files (with the /PDF option) are to be saved. For folder *name*, you must supply the entire path name, including drive. We recommend you enclose the folder name and path in double quotes. Neither the folder specified nor any of the parent folders need exist. DataCAD will attempt to create it, even if the folder is not found. If DataCAD fails to create the folder, an error will be reported in the Batch Plot Session dialog and the file will not be processed.

Example:

```
DCPLOT Project Plot File Version 1.0
; Plots the MSP Sheet named 'PLAN' to a PDF file in the folder
; "C:\PDF Files for Clients\Smith".
DCPLOT "C:\MY DRAWINGS\FLOORPLAN.DC5" /SHEET:PLAN /PDF /OF:"C:\Client PDF Files\Smith"

; Plots 2DGoToView #1 to a PLT file in the network folder '\\SERVER\CAD\PDF Files'
DCPLOT "C:\MY DRAWINGS\FLOORPLAN 2.DC5" /V:1 /F+ /OF:"\\SERVER\CAD\PDF Files"
```

OverShoot Option

Syntax: /OS:*n* or OVERSHOOT:*n*
 (*n* is an integer value)

Description: This turns line overshoot display on or off based on the value of *n*. Line overshoot is turned on if *n*=1 or off if *n*=0. If the line overshoot option is not specified, the current line overshoot display setting in the drawing is left as is.

Example:

```
DCPLOT Project Plot File Version 1.0
; Turn Overshoot on before plotting this drawing
DCPLOT "C:\MY DRAWINGS\FLOORPLAN.DC5" /OS:1
```

Pause Option

Syntax: /P:*n*
 (*n* is an integer value)

Description: This option sets a pause of *n* seconds between plots. This is useful if a particular plotting device or network configuration requires time between plots to finish the previous plot and/or to reset itself. If you don't specify this option, there will be no pause between plots.

Example:

```
DCPLOT Project Plot File Version 1.0
; Plot 2D GoToViews 1 through 10 and pause for 5 seconds between them
DCPLOT "C:\MY DRAWINGS\FLOORPLAN2.DC5" /V:1234567890 /P:5
```

Pen Width Option

Syntax: /PW:*n* or PENWIDTH:*n*
 (*n* is an integer value)

Description: This sets the value for Pen Width to *n*. DataCAD uses the PenWidth value to determine the offset required for multiple-stroke lines (lines of a weight greater than 1). *n* is given as an integer in plotter units, to be consistent with the way DataCAD uses this value. If not specified, the current pen width setting in the drawing is left as is.

Example:

```
DCPLOT Project Plot File Version 1.0
; Multi-Weight lines will be stroked with an offset of 20 plotter units
DCPLOT "C:\MY DRAWINGS\FLOORPLAN.DC5" /PW:20
```

Plot To Plot File Option – (Plot File Name = Drawing Name)

Syntax: /F

Description: This generates a plot file(s) as opposed to plotting directly to the plotter. The plot file(s) will have the same name as the drawing file, but with a .PLT extension. It will be saved in the folder that is currently configured to contain plot files. You can override the output folder for the plot file; to do this, see OutputFolder Option.

NOTE: Use this option if only one plot file is to be generated from each drawing, otherwise the file will be overwritten by the next plot file generated from that drawing. This would happen if you plot multiple GoToViews or MSP sheets in a single session and plot them all to file. In general (and for clarity of output file contents), use only the /F+ option.

Example:

```
DCPLOT Project Plot File Version 1.0
; Plot the QuickLayout of this Drawing to a Plot file -plot file will be named 'FLOORPLAN.PLT'
DCPLOT "C:\MY DRAWINGS\FLOORPLAN.DC5" /F

; Plot to File, placing the plot file in the 'C:\My Plot Files' folder.
; the QuickLayout will be plotted, and the plot file will be named 'FLOORPLAN2.PLT'
DCPLOT "C:\MY DRAWINGS\FLOORPLAN2.DC5" /F /OF:"C:\My Plot Files"
```

Plot To Plot File Option – Enhanced (Plot File Name = Drawing Name + Descriptor)

Syntax: /F+

Description: This generates a plot file(s) as opposed to plotting directly to the plotter. The plot file name(s) will be constructed by using the drawing file name, a descriptor telling what was plotted, then the .PLT extension. They will be saved in the folder that is currently configured to contain plot files. You can override the output folder for the plot file by using the OutputFolder Option.

Example:

```
DCPLOT Project Plot File Version 1.0
; Plot the QuickLayout of this Drawing to a Plot file -plot file will be named
; 'FLOORPLAN - Quick Layout.PLT'
DCPLOT "C:\MY DRAWINGS\FLOORPLAN.DC5" /F+

; Plot the 'Elec' and 'Plumb' 3D GoToViews of this Drawing to Plot files
; plot files will be named 'FLOORPLAN2 - Go-To-View Elec.PLT' and
; 'FLOORPLAN2 - Go-To-View Plumb.PLT', and they will be placed
; in the 'C:\My Plot Files' folder
DCPLOT "C:\MY DRAWINGS\FLOORPLAN2.DC5" /F+ /V3:Elect /V3:Plumb /OF:"C:\My Plot Files"
```

Plot To PDF File Option

Syntax: /PDF

Description: You can generate a PDF file. The PDF file name will be constructed by using the drawing file name, a descriptor telling what was plotted, then the .PDF extension. It will be saved in the folder that is currently configured to contain plot files. You can override the output folder for the PDF file using OutputFolder Option.

Example:

```
DCPLOT Project Plot File Version 1.0
; Plot the QuickLayout of this Drawing to a PDF file - PDF file will be named
; 'FLOORPLAN - Quick Layout.PDF'
DCPLOT "C:\MY DRAWINGS\FLOORPLAN.DC5" /PDF

; Plot the 'Elec' and 'Plumb' 3D GoToViews of this Drawing to PDF files
; PDF files will be named 'FLOORPLAN2 - Go-To-View Elec.PDF' and
; 'FLOORPLAN2 - Go-To-View Plumb.PDF', and they will be placed
; in the 'C:\My PDF Files' folder
DCPLOT "C:\MY DRAWINGS\FLOORPLAN2.DC5" /PDF /V3:Elect /V3:Plumb /OF:"C:\My PDF Files"
```

QuickLayout Option

Syntax: /Q

Description: This specifies that the current QuickLayout is to be plotted. Note that /Q is assumed unless other GoToViews and/or MSP sheets are specified for plotting; in that case, the /Q option MUST be specified so that the quick layout will be plotted.

Example:

```
DCPLOT Project Plot File Version 1.0
; Plot 3D GoToView named 'Overall' and the current QuickLayout
DCPLOT "C:\MY DRAWINGS\FLOORPLAN.DC5" /V3:Overall /Q
```

Set Printer Option

Syntax: /PR:"name" or /PRINTER:"name"
(name is the name of a printer)

Description: You can specify a Windows printer to which the drawing is to be plotted. Make sure that *name* is the name of a printer exactly as it appears in the Windows Control Panel (as with other batch plot scripting options, this is NOT case-sensitive). This option overrides any setting that the drawing file had saved internally regarding the printer it was set up to use. Make sure that the specified printer supports the same paper size as the printer that the drawing was set up for internally because there is no checking or error handling for this, so unexpected results could occur. The most common use for this option would be if two printers on a network have similar (if not identical) paper handling capability and a plot job is to be sent to one or the other because they have different media loaded, etc.

If the named printer is not found in the list of installed printers on the system, then the command will fail, no plot will be sent, and an error will be reported on the Batch Plot Session dialog.

Example:

```
DCPLOT Project Plot File Version 1.0
; Overrides any internal setting for which plotter to send to, and forces the
; plot to go to the 'XEROX 8825'. The QuickLayout only is plotted
; saved views and/or sheets, and/or QuickLayout
DCPLOT "C:\MY DRAWINGS\FLOORPLAN.DC5" /Q /PR:"XEROX 8825"
```

Set Printer Bin Option

Syntax: /B:"name" or /BIN:"name"
(name is the name of a printer)

Description: You can specify a specific paper bin on the printer to which the drawing is to be plotted. For *name*, input the name of a printer bin exactly as it appears in the list of bins in the Windows printer driver for the printer (this is not case sensitive). This option would mainly be used with the Set Printer option, but it does not need to be as long as the specified bin is a valid bin name on the printer to which the drawing is currently set to plot.

If the named printer bin is not found in the list of bins within the printer driver, then the command will fail, no plot will be sent, and an error will be reported on the Batch Plot Session dialog.

Example:

```
DCPLOT Project Plot File Version 1.0
; Sends the plot to the Xerox 8825 printer, and to the bin called 'Roll 1'
DCPLOT "C:\MY DRAWINGS\FLOORPLAN.DC5" /Q /PR:"XEROX 8825" /BIN:"Roll 1"
```

Sheet Option

Syntax: /SHEET:*name*
 (*name* is an string value)

Description: You can specify a Multi-Scale Plot (MSP) sheet for plotting. If the MSP sheet specified is not found in the drawing, an error will be reported on the batch plot session screen. Multiple /SHEET options can be specified on the plot command line to plot more than one MSP sheet.

Example:

```
DCPLOT Project Plot File Version 1.0
; Plots the MSP Sheet named 'BASEMENT' to a PDF file
DCPLOT "C:\MY DRAWINGS\FLOORPLAN.DC5" /SHEET:BASEMENT /PDF

; Plots the MSP Sheets named 'PLUMB' and 'ELECT' to the plotter
DCPLOT "C:\MY DRAWINGS\FLOORPLAN2.DC5" /SHEET:PLUMB /SHEET:ELECT
```

Stamp Option - (Valid in DataCAD Version 10.01 Only)

Syntax: /S

Description: This turns Plot Stamping to “On” **in DataCAD Version 10.01 only**. Text containing strings such as “@PLTDATE,” “@PLTTIME,” and “@DWGNAME” would be expanded to current values during the plot. **This option is no longer needed in DataCAD Versions 10.02 and later because plot stamping options are now fully supported for both screen display and for plotted output; in versions 10.02 and later, stamp text expansion is always “On.”**

Example:

```
DCPLOT Project Plot File Version 1.0
; Turns Plot Stamping 'On' in DataCAD Version 10.01 ONLY
DCPLOT "C:\MY DRAWINGS\FLOORPLAN.DC5" /S
```

Use Internally Saved Batch Plot Settings Option

Syntax: /INTERNAL

Description: This plots the QuickLayout, GoToViews, and/or MSP sheets you previously specified using the Batch Plotting Setup dialog and saved internally in the drawing file. Although it can be combined with other view, sheet, and QuickLayout selection options, **this option should really only be used by itself** because no duplication checking is done. In other words, if you set up the file internally to plot MSP Sheet “Plan,” and specified both /SHEET:Plan and /INTERNAL options, then two copies of the MSP Sheet “Plan” will be generated.

The same default setting applies with the /INTERNAL command as it does with “standard” batch plotting. If you have not gone into the Batch Plot Setup dialog within the drawing and selected what you want plotted in a batch plot session, the currently defined QuickLayout will be plotted.

Example:

```
DCPLOT Project Plot File Version 1.0
; Plots the Views, Sheets, and/or QuickLayout that the user previously
; specified and saved when working on the drawing and using the 'Batch Plot Setup' Dialog
; Output is sent to PDF file(s) in this example
DCPLOT "C:\MY DRAWINGS\FLOORPLAN.DC5" /INTERNAL /PDF
```