Tutorial: Printing a Drawing

5

DataCAD has many options available for plotting or printing your drawing. This chapter will focus on printing your plan on an 8 1/2″ x 11″ sheet of paper.

In this chapter:

- Printing the schoolhouse drawing
- Setting printing options

Printing the Schoolhouse Drawing

If you are not in DataCAD, start DataCAD now. Choose the drawing you worked on in the previous tutorials. Before plotting the schoolhouse floor plan, make sure:

- a printer or plotter is either connected to your computer or available via a network connection
- the printer or plotter is turned on and is online or ready to receive data
- you have the corresponding Windows driver for your printer installed on your computer (see your printer's manual for more information about installing a printer driver)

➔ To plot the schoolhouse:

1. Choose Print from the File pull-down menu in the Menu Bar, or choose Plotter from the Utility menu in the Menu Window. The following message is displayed: *A printer has not yet been selected for this drawing. Please click OK to open the Print Setup dialog box and assign a printer to this drawing file.* Since this is the first time you've printed this drawing, DataCAD requires you to choose a printer, paper size, and orientation before you assign pens, complete a print layout, and plot your drawing. To accept the default settings, click OK and skip to step 5; otherwise, continue with step 2 below.
2. In the Printer/Plotter Settings dialog box, choose a printer from the Printer Name drop-down box.
3. Choose a paper size. The sizes available are read from your printer driver. If a size you want is not displayed in the drop-down box, your printer may not support it. Choose the closest appropriate size or use the User-Defined option if available, or use a different printer.
4. Click OK to close the Settings dialog box. The Plotter menu is displayed in the Menu Window. You can exit DataCAD and open the printer driver to see what paper sizes are supported. Many times, the default settings of the driver do not include all supported sizes. You must check them to activate them.

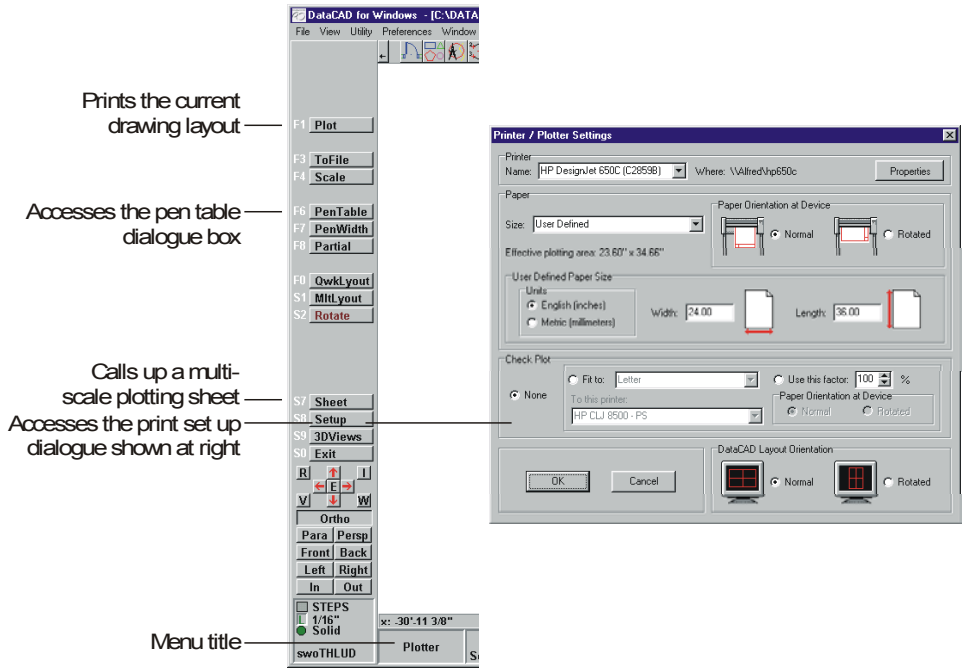

Figure 5.1: The Plotter menu and Printer/Plotter Settings dialog box

5. Choose Scale to set the plotting scale. The current plotting scale is displayed in the Message Window.
6. Choose 1/8" if it's not already the current plotting scale.
7. Choose QwkLyout from the Plotter menu. A dashed box appears representing the 8 1/2" x 11" sheet. If you move the cursor over the Drawing Window, you will find a movable copy of this box. You are prompted: *Locate sheet of paper using cursor, "ENTER" to end.*
8. With the box centered over the drawing, click the middle mouse button. This object snaps to the center of the title block (the centered point of the rectangle) and centers the title block. You can also move the box anywhere you want and click with the left mouse button.
9. Choose Plot to send the drawing directly to the plotter or printer. The schoolhouse floor plan is plotted.

Printing Options

There are many printing options that help you get the plotted output you want. In the next set of exercises, you will use a few of the images that were created in this book to build a plot that contains multiple drawings. Each drawing added to the plot can be set to a different scale.

Assigning Pens

Use Pen Assignments in the Pen Table dialog box to set a hierarchy of line weights, which help add line definition to your drawings. For example, if your walls were a heavier line weight than your doors and windows, the door and window openings would appear clearer. This difference in line weight helps define the content of your drawing.

➔ To set the pens for printing the schoolhouse drawing:

1. Choose Plotter.
2. Choose PenTable to open the Pen Table dialog box. In the Pen Assignments section, you will assign pen numbers to match the colors used in the drawing. You'll notice that the first color in the Pen Assignments list box is highlighted.

   The Pen Table dialog box also includes a Pen Settings section that allows you to choose the pen width, color, and color density for each pen you assigned in the Pen Assignments portion of the dialog box. See "Using Pen Tables" in the "Printing Your Drawing" chapter for detailed information on using the Pen Table.
3. Select White in the Pen Assignments box, if it's not already highlighted. Notice that just below this list box is a small box displaying the highlighted color, followed by an equal sign and a number in a small input box. This number is the pen that will be used to plot all white lines in your drawing.
4. Type **1** in the input box. The color white is now set for pen number 1.
5. Select Red in the Pen Assignments box or press (¥) to highlight Red.
6. Type **3** in the input box. The color red is now set for pen number 3.
7. Set the remainder of the colors: for Green use pen 1, for Cyan use 3, for Magenta use 3, for Brown use 4, for Lt. Grey use 4, for Lt. Red use 2, for Lt. Green use 3, and for Yellow use 2.
8. Click OK to save the pen assignments and close the Pen Table dialog box.
9. Right-click to return to the Utility menu.

Using Multi-scale Plotting

The GotoViews menu will help you automate the viewing process which, in turn, is used with multi-scale plotting to place differently scaled details on the same sheet. You can choose GotoView in the Utility menu, in the 3DViews menu, or from the View pull-down menu to assign an unlimited number of views. Each view can have its own set of assigned layers. For example, in this schoolhouse tutorial, there are 14 different layers. If you want to view only the Walls, Doors, and Windows layers, you can create a view using GotoView with only these three layers visible. When you choose that view, all layers except Walls, Doors and Windows will automatically be toggled off. Choose another predefined view to turn on a different set of layers. Using GotoView, you can quickly change your view and continue working.

The GotoView option is a helpful tool to use when you have a drawing that contains floor plans, elevations, sections, and 3D models. In the following steps, you will establish two views, which help complete the remainder of this schoolhouse project.

➔ To create views:

1. Choose Orthographic from the View pull-down menu for plan view.

2. Recalculate the extents of the drawing.
3. Choose GotoView from the View pull-down menu.
4. Choose Add View. You are prompted: *Enter name of new view?*
5. Name the view **3DPlan**.
6. Toggle the Doors, Windows, Plumb, Dim, Hatch, and Notes layers on.
7. Toggle 3DWalls, 3DWindow, 3DDoors, 3DRoof, and 3DMisc layers off.
8. Recalculate the extents of the drawing.
9. Choose GotoView from the View pull-down menu.
10. Choose Add View. You are prompted: *Enter name of new view?*
11. Name the view **2DPlan**.

When you need to switch between 3D layers and 2D layers, use the GotoView menu. In the next section, you will use the views you just set.

➔ To use multi-scale plotting:

1. Press (L) to go to the Layers menu.
2. Make Border the only active layer using ActvOnly from the Layer menu.
3. Recalculate the extents of the drawing by clicking on R on the Navigation Pad or by choosing WindowIn Recalc from the View pull-down menu in the Menu Bar.
4. Right-click to return to the Utility menu.
5. Choose Plotter.
6. Choose MltLyout.
7. Choose Layout. The drawing appears as a box attached to the cursor; the dashed box represents the 8 1/2" x 11" sheet. You are prompted: *Locate detail on sheet of paper, "ENTER" to end*.
8. Center the drawing in the dashed box and click to set the title block in place. You are prompted: *Enter name of new detail: detail 1*.
9. Type **Titleblk** and press (Enter).
10. Right-click twice to return to the Utility menu.
11. Choose GotoView.
12. Choose 2DPlan. Right-click once.
13. Recalculate the extents of the drawing by clicking on R on the Navigation Pad or by choosing WindowIn Recalc from the View pull-down menu in the Menu Bar.
14. Choose Plotter from the Utility menu.
15. Choose MltLyout.

16. Choose Layout. The drawing appears as a box attached to the cursor; the dashed box represents the 8 1/2" x 11" sheet. You are prompted: *Locate detail on sheet of paper, "ENTER" to end*.
17. Center the drawing over the dashed box and click the left mouse button to position the plan. You are prompted: *Enter name of new detail: detail 2*.
18. Type **Plan** and press (Enter).
19. Recalculate the extents of the drawing by clicking on R on the Navigation Pad or by choosing WindowIn Recalc from the View pull-down menu in the Menu Bar.
20. Make FrntElev the only active layer. The elevation that was created earlier is now on the screen.
21. Choose Plotter from the Utility menu.
22. Choose Scale to change the scale factor.
23. Choose 1/16".
24. Choose MltLyout.
25. Choose Layout. The drawing appears as a box attached to the cursor; the dashed box represents the 8 1/2" x 11" sheet. You are prompted: *Locate detail on sheet of paper, "ENTER" to end*.
26. Move the drawing into the upper-right quarter of the dashed box. Click to set the elevation in place. You are prompted: *Enter name of new detail: detail 3*.
27. Type **FrntElev** and press (Enter).
28. Recalculate the extents of the drawing by clicking on R on the Navigation Pad or by choosing WindowIn Recalc from the View pull-down menu in the Menu Bar.
29. Make Hide1 the only active layer.
30. Choose Plotter from the Utility menu.
31. Choose Scale to change the scale factor. You can press (PgUp) and (PgDn) to change the scale of any detail on-the-fly before you place it on the sheet.
32. Choose 1:20.
33. Choose MltLyout.
34. Choose Layout. The drawing appears as a box attached to the cursor and the dashed box that appears representing the 8 1/2" x 11" sheet. You are prompted: *Locate detail on sheet of paper, "ENTER" to end*.
35. Move the drawing into the lower-right quarter of the dashed box. Click to set the perspective in place.
36. Add a new detail named Perspect.
37. Return to the Plotter main menu.
38. Choose Plot to send the drawing directly to the plotter.