Starting Plot Designer

Start the Plot Designer program by entering `jdesign` in the VNMR input window.

This opens the Plot Designer window, shown in Figure 69.

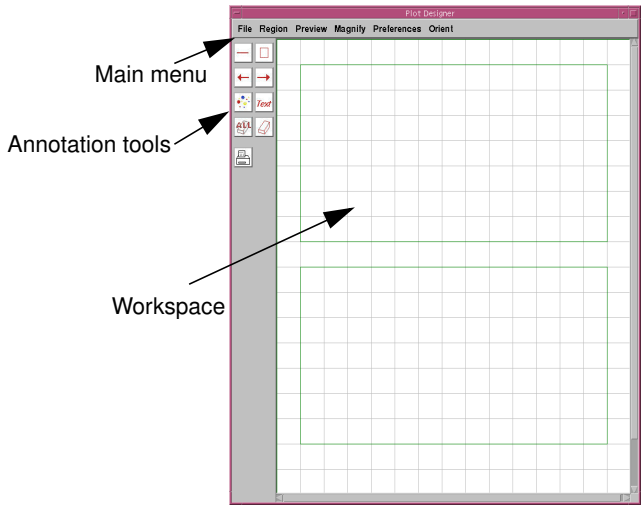

Figure 69. Plot Designer Window

Customizing the Plot Designer Window

You can easily change the size and appearance of the Plot Designer window by doing the following procedure:

1. Click on **Preferences** in the main menu, then **Set Up** to open the Window Preferences panel shown in Figure 70.
2. To change an aspect of, or property in, the Plot Designer window, click on its corresponding button to open a pull-down menu.

   See Table 39 for a description of each control.

   is an example of the window without visible region borders and without a grid.

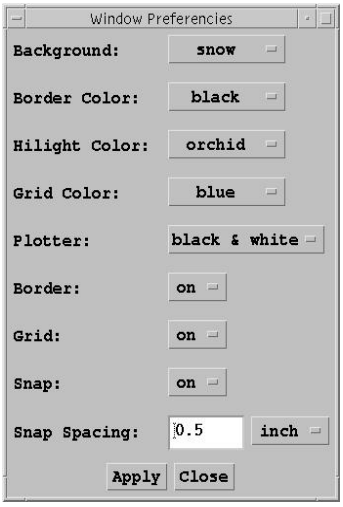

Figure 70. Window Preferences Panel

3. After you have entered all of your preferences, click **Apply** to execute the changes.
4. Click **Close** to exit the window.

Customizing a Plot

You can add simple graphics and text to a plot and change its size and appearance by using the tools listed in Table 40. To use a drawing tool, press and hold down the left mouse button and drag the cursor in the workspace.

Table 39. Window Preference Controls

Control	*Function*
Background	Changes the background color of the window.
Border Color	Changes the color of the border surrounding the workspace.
Highlight Color	When you double-click on an object, its color changes to indicate that it is highlighted. This option controls the highlight color.
Grid Color	Changes the color of the grid.
Plotter	Allows you to choose a black and white or color plotter.
Border	Shows (**on**) and hides (**off**) region borders.
Grid	Shows (**on**) and hides (**off**) grid in the workspace.
Snap	The grid has magnetic properties. When snap is turned **on**, the path of an object (the center of its border) automatically snaps to the grid whenever you draw or move the object or change its size or shape. Turning **off** Snap demagnetizes the grid.
Snap Spacing	Controls the amount of space on the grid to which an object snaps. Spacing can be in inches, centimeters, or points.

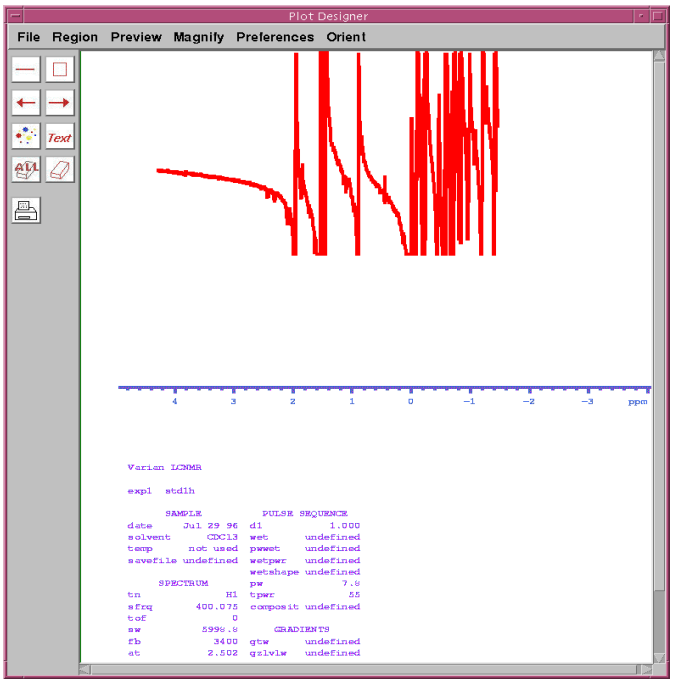

Figure 71. Window with Data and Without Borders and a Grid

Using Templates

You can create your own templates. After you have created a design, do the following procedure to save your design as a template:

1. Click **File**-**Templates** to open the Plot Templates window.
2. Enter a name in the **Template** field. If you want the file to be the default template, click the box next to **Use this template as default**. After you select a file as a

Table 40. Plot Designer Tools

	**Line Drawing**	Draws a line.
	**Box**	Draws a box.
	**Arrows**	Draws an arrow; places the arrowhead at the point in which you START to draw the arrow.
		Draws an arrow; places the arrowhead at the point in which you END drawing the arrow.
	**Item Preferences**	Sets the color and size of lines and fonts. To edit an object, highlight it by double-clicking on it. For a description of its properties, see page 256. You can also open this tool by clicking on **Region-Preferences**.
	**Text Input**	Allows you to add text into your design. Several options allow you to control the size and appearance of the text. To use this tool, see “Adding Text” on page 257.
	**Erasers**	The eraser tool removes only selected objects.
		The **ALL** eraser removes all objects. You can also remove selected objects by using the **Region-Delete All** option described on page 256.
	**Print**	Prints a file.

template, the next time that you start Plot Designer, it will automatically open with the template.

3. Click **Save** to store the template in `$vnmruser/templates/plot` directory.

   If you try to save a template with the same name as an already existing template, a warning notifying you that the file will be overwritten appears. If you do not want the file replaced, click **Cancel**.

4. Quit the Plot Templates window by clicking on **Close**.

Using Saved Templates

After you have created templates, you can plot a page with a specific template by typing the `jplot` command and the template name. For example, entering `jplot('t1')` starts a plot with the t1 template automatically loaded.

If you opened Plot Designer with the `jdesign` macro, the workspace will either be empty or contain the design that was being worked on the previous time Plot Designer was used. Do the following procedure to load a template file:

1. Click on **File** in the main menu, then **Templates** to open the Plot Templates window.
2. Highlight (select) a template by either DOUBLE-CLICKING on a file in the list in the upper region of the window or by entering the file name in the **Template** field. If you want the file to be the default template, click on the field **Use this template as default**.
3. To insert the template into the Plot Designer window, click on **Open**.
4. Click **Close** to exit the window.

Removing Templates

To remove a template from the list in the Plot Templates window, click on **Delete**. A warning appears notifying you that the template will be deleted. Click **Cancel** if you do not want to delete the template.

Importing a Plot

To import a plot from the VNMR graphics window onto the Plot Designer workspace, you must first create a region. Regions are smaller workspaces in which you can customize a plot. Create a region by doing the following procedure:

1. Click on **Region** in the main menu, then **New** to create a region on the workspace. The cursor arrow changes to cross-hairs.
2. To draw a region, press and hold down the left mouse button, drag the cursor across the workspace, then release the mouse button.
3. If a region is not already selected, highlight it, then click **Region-Edit** to open the Region Editor window shown in Figure 72. Region Editor is a text editor in which you can enter commands to change an imported plot.

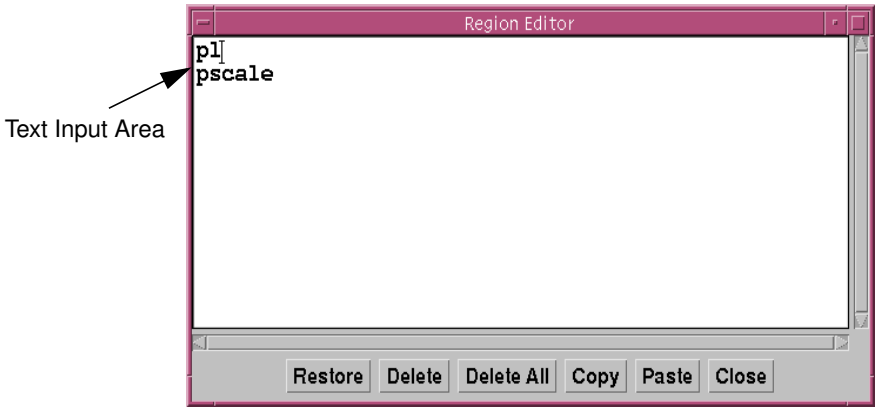

Figure 72. Region Editor Window

4. Enter a VNMR command (such as `pl` or `pscale`) in the text input area.
5. Click **Preview-Selected** to import the plot into the region. Click **Preview-All** to import plots into multiple regions.

You can also import a plot into a region by doing the following procedure:

1. Click on **Region-Edit** to open the Region Editor.
2. Draw a region.

3. Press the right mouse button to open the plot menu window 

.
4. Choose a command to import into the Region Editor.

Commands are stored in the `/$vnmruser/templates/plot/menu` file or `/$vnmrsystem/user_templates/plot/menu` file. You can edit both of these files to add or delete commands. In the `menu` file, the command is indicated by two lines: the first line is the label of the command that appears in the plot menu window; the second line is the command itself. In Figure 73, the label `pl` identifies the command line `pl pscale`. The label `PAP` identifies the `pap` command.

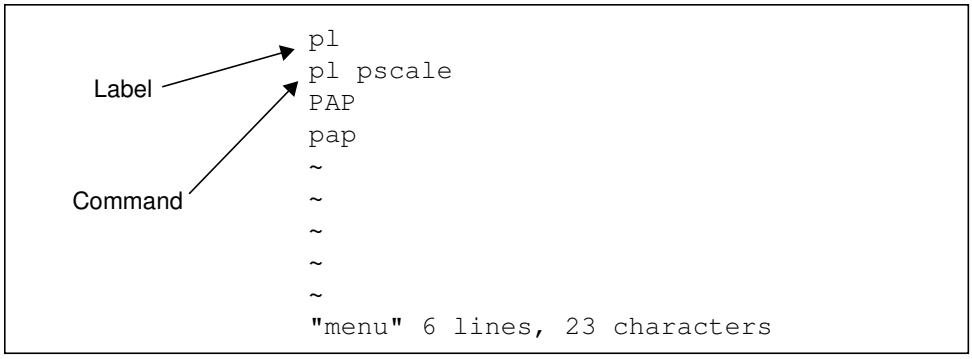

Figure 73. `menu` File

Editing a Plot

To edit a plot, do the following procedure:

1. Highlight a region.
2. Click **Region-Edit** to open the Region Editor window.
3. Enter a command (such as `pl` or `pscale`) in the text input area. Use the buttons listed in Table 41 to edit text.

Table 41. Region Editor Buttons

Button	*Function*
Restore	Applies the original template to a region. If you opened a template and made changes to it, you can restore it to its original design by using this button.
Delete	Removes text. This option is not similar to **Copy**. Deleted text is not stored in a buffer; do not use **Delete** to cut and paste text.
Delete all	Clears all text from the input area.
Copy	Duplicates text.
Paste	Inserts copied text in the input area.

4. Exit Region Editor by clicking **Close**.

Deleting a Region

To delete a region from the workspace, highlight the region, then click **Region-Delete**. Click **Region-Delete All** to remove all regions.

Note: Regions removed with **Delete All** are not stored in a buffer and cannot be restored to the workspace.

Restoring a Deleted Region

To restore a *single* region deleted from the workspace, click **Region**-**Undelete**. Regions removed with **Delete All** cannot be restored with **Undelete**.

Clearing the Workspace

To *permanently* remove all regions from the workspace, click **Delete All**. Remember, if you remove all regions, you cannot restore them with **Undelete**.

Customizing Objects in a Region

You can change the size and color of objects in a region with the Item Preferences window, shown in Figure 74. Click on **Region**-**Preferences** to open this window. You can also open the window by clicking on the Item Preferences tool  , described on page 253.

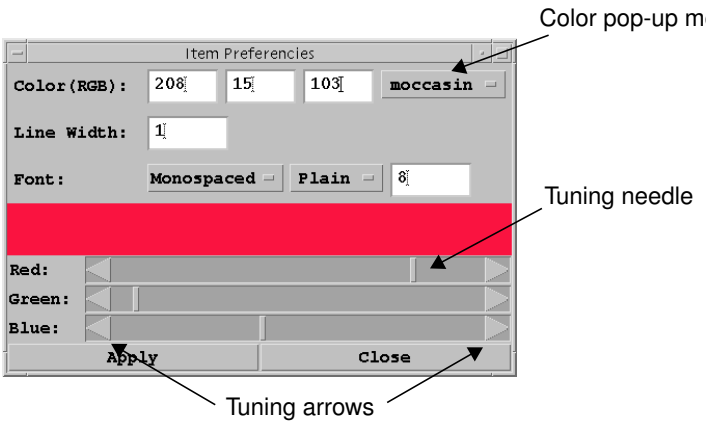

Figure 74. Item Preferences Window

Changing Line Width

Change the width of a line by doing the following procedure:

1. Highlight the line or region by double-clicking on it.
2. Enter a new width in the **Line Width** fi eld.
3. Click **Apply** to change the line.
4. Click anywhere in the workspace to deselect the line.

Changing Fonts

Plot Designer has three font families: SansSerif, `Monospaced`, and Serif. Fonts can be Plain, **Bold**, or *Italic*. To change the family, style, and size of a font, do the following procedure:

1. Highlight the text or region.
2. Click on the Item Preferences tool  to open the Item Preferences window.
3. Choose a family, style, and enter a size in the **Font** fi eld.

4. Click **Apply** to change the text.

Changing Line Color

You can change the color of a line by doing the following procedure:

1. Highlight the line or region.
2. In the Item Preferences window, click on the color button green to open a pop-up menu showing a range of colors.
3. Move either the tuning needle left or right to change a color. You can also change a color by clicking on the left or right arrows in the **Red**, **Green**, and **Blue** fi elds; the values in the **Color(RGB)** fi eld automatically change as you move a needle.
4. When you are satisfi ed with a color, click**Apply**.
5. Place the cursor anywhere in the workspace and click once to see the color change.

Adding Text

To add text into your design, do the following procedure:

1. Click on the text input tool Text to open the text input window.
2. Type text in the fi eld at the top of the window.

   You can customize your text by clicking on the desired options and entering a font size in the indicated fi eld.
3. Click on **Put** and drag the cursor into the workspace, then click once to paste in the text.

To copy text that is already on the workspace and paste it in different font styles, do the following procedure:

1. Highlight the text.
2. Open the Text Input window shown in Figure 75 by clicking the text input tool Text .

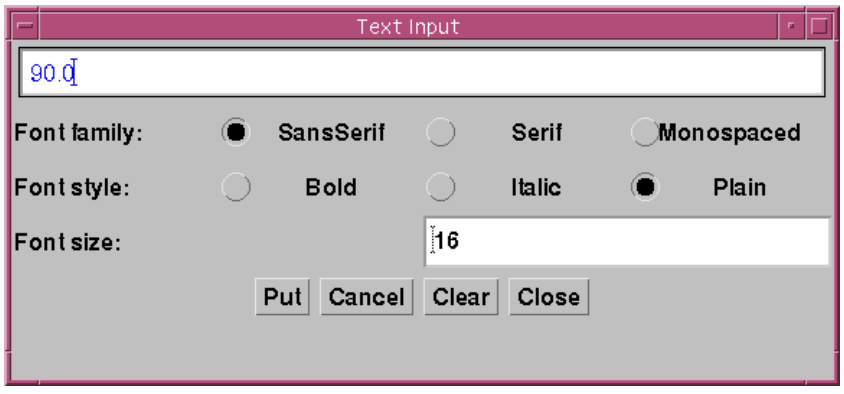

Figure 75. Text Input Window

3. Select a **Font family** and **Font style**, and enter a **Font size**.
4. Click **Put** to paste the text in the workspace.

Changing Font Color

To change the color of fonts, repeat the procedure for Changing Line Color.

Adjusting and Restoring Plot Parameters

When you draw a region, the scaling parameters of the plotting area (`wcmax` and `wcmax2`) are adjusted by the macro `jplotscale`. The scaling parameters (`io`, `is`, `vs`, `wc`, and `wc2`) of a plot that is imported into a region are automatically adjusted according to `wcmax` and `wcmax2`. If you want to use the adjusted parameters, enter the following command string, which first restores the parameters of the current experiment (`n`) to the plot, then applies the adjusted parameters to the plot:

```
jplotunscale jexpn jplotscale
```

If you do not want to use the adjusted parameters, enter the following command:

```
jplotunscale jexpn
```

`jplotunscale` is a macro that restores the original parameters of the current experiment to the plot.

Moving Objects and Changing Object Size

You can move an object by double-clicking on it and dragging the mouse across the workspace. To move a region, click anywhere inside the region or on its border. You can also use arrow keys to move objects.

You can shrink or enlarge a region by double-clicking on it, placing the cursor on a border anchor, and dragging it.

Changing the Shape of the Plot Designer Window

Plot Designer can be viewed in two orientations, **Landscape** or **Portrait** (which is the default orientation). You can change the shape of the Plot Designer window in the **Orient** menu.

Changing the Size of the Plot Designer Window

Increase or decrease the size of the Plot Designer window by clicking on the sizes listed in the **Magnify** menu.

Saving Your Plot

After you are satisfied with the plot that you have created, do the following procedure to store your file:

1. Click on **File** in the Main Menu, then **Save Data** to open the Plot Save window shown in Figure 76.

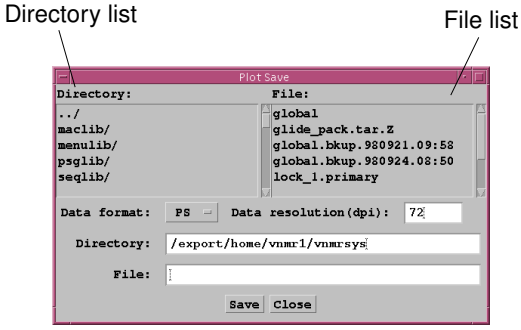

Figure 76. Plot Save Window

2. Scroll down the list of directories and choose a directory. You can also enter a path for your file in the **Directory** field.
3. Select a **Data format** for your file and enter a **Data resolution**. Table 42 lists the formats that are available.

Table 42. Formats Available in Plot Designer

Format	*Description*
AVS	AVS X image file
BMP	Microsoft Windows bitmap image file
EPS	Adobe Encapsulated PostScript file
FAX	Group 3 FAX
FITS	Flexible Image Transport System
GIF	Compuserve Graphics Interchange Format (version 89a)
GIF87	Compuserve Graphics Interchange Format (version 87a)
JPEG	Compressed format from Joint Photographic Experts Group
MIFF	Magick image file format
PCD	Photo CD
PCX	ZSoft IBM PC Paintbrush file
PDF	Portable Document Format
PICT	Apple Macintosh QuickDraw/PICT file
PGM	Portable gray map
PNG	Portable Network Graphics
PS	Adobe PostScript file
PS2	Adobe Level II PostScript file
SGI	Irix RGB image file
SUN	Sun Rasterfile
TGA	Truevision Targa image file
TIFF	Tagged Image File Format
VIFF	Khoros Visualization image file
XBM	X11 bitmap file
XPM	X11 pixmap file
XWD	X Window System window dump image file

4. Label your file by entering a name in the **File** field.
5. Click **Close** to exit the window.

Printing Your Plot

To print your plot, click on the print tool  .

Exiting Plot Designer

To exit the program, click on **File**-**Quit**. If you leave a design in the window when you exit Plot Designer, your design will automatically appear in the workspace the next time that you use the program.