

# CADAM Drafting Hints and Tips

## Editing

### **Associative Dimensions:**

You can globally associate all dimensions with their referenced geometry. That means you can import an unintelligent drawing using dxf for example and associate all of its dimensions with the geometry. Simply go to FK Dimension /GLOBAL/, /ASSOC/, /RETROFIT/, YN all. All of your dimensions are now associated with the geometry. CCD highlight shows you what geometry is associated. Subsequent changes to either the geometry or the dimension will be reflected in its associated element. Move geometry or change the radius of an arc, and the dimension will reflect the change. Change the dimension, and the geometry will move or change.

### **Circles:**

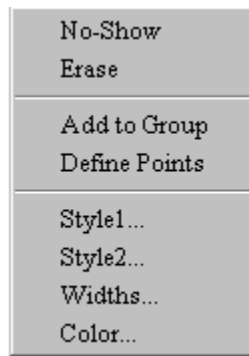
Select any circle with the right mouse button until the following menu appears:



Perform any of the listed functions on the circle. Note the message is appropriate for a circle only. The case shown is for a circle that is a member of a temporary group. That is why it has *Remove from Group* as one of the options. (Requires Mouse Advanced Button Functions to be enabled.)

### **Lines:**

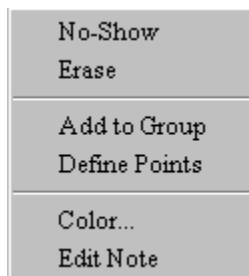
Select any line with the right mouse button until the following menu appears:



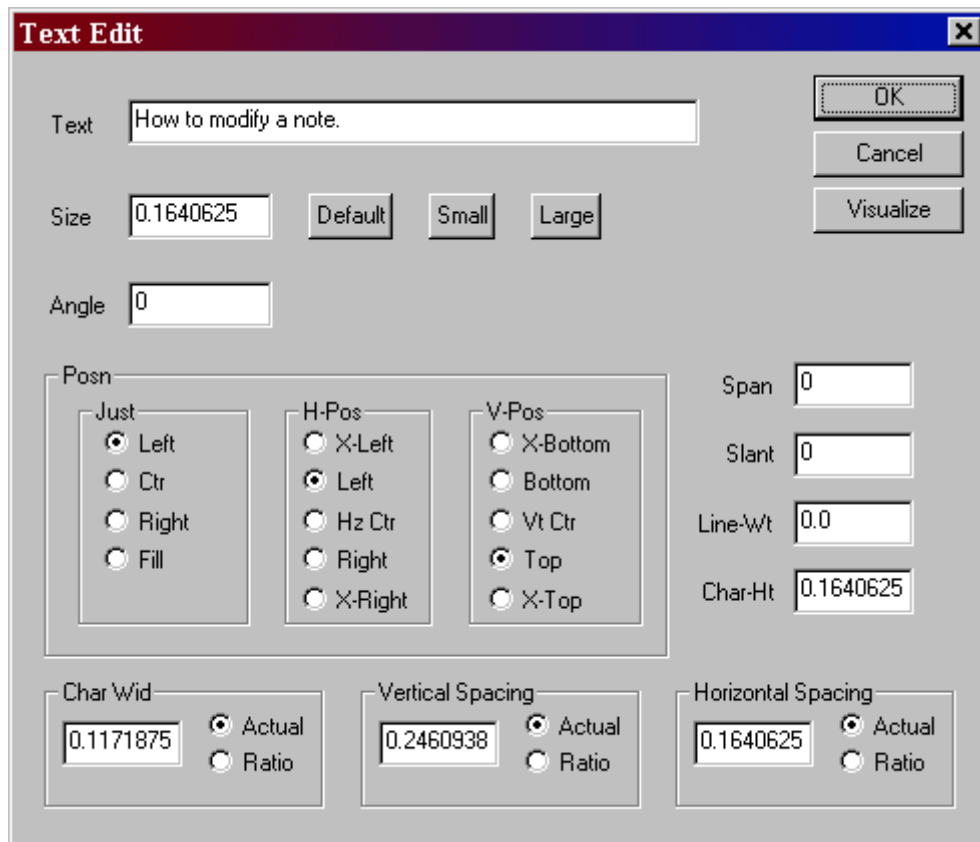
Perform any of the listed functions on the line. Note the message is appropriate for a line only. (Requires Mouse Advanced Button Functions to be enabled.)

**Notes:**

Select any note with the right mouse button until the following menu appears:



Select *Edit Note* and the following panel will appear.



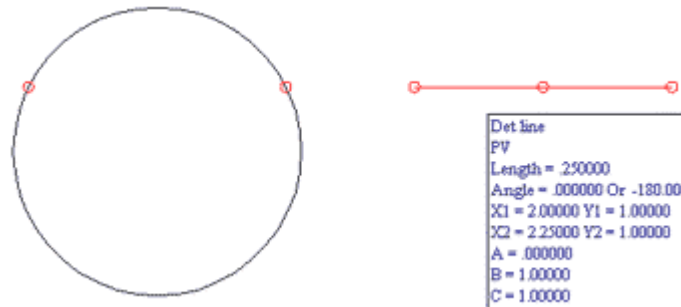
Evaluate and change any of the existing note parameters and see the change by selecting the button **Visualize**. If you do not want to keep any of the changes, select **Cancel**, or keep the changes by selecting **OK**. (Requires Mouse Advanced Button Functions to be enabled.)

# Creating:

## **CADAM Cursor:**

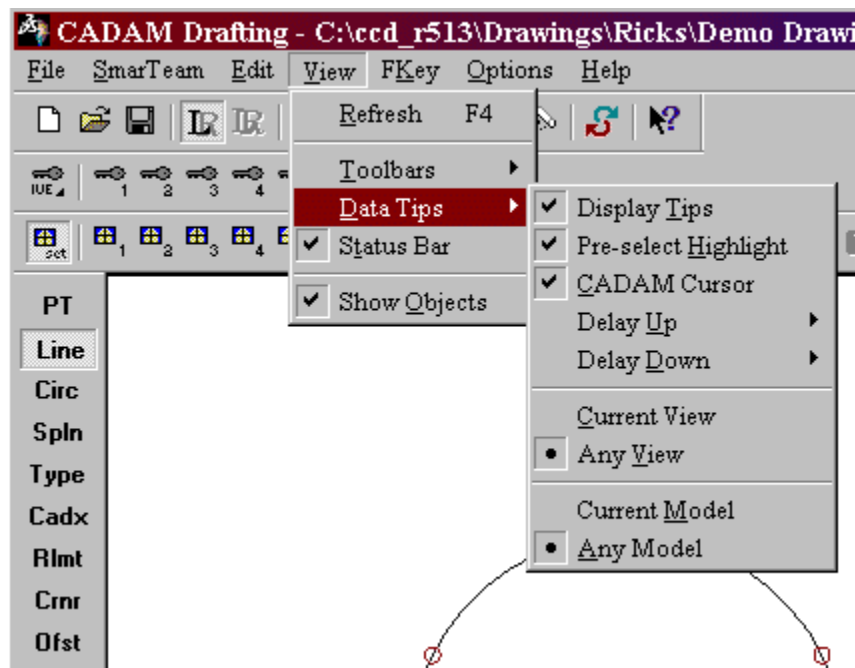
Creates temporary construction points on elements. Also, if you move your cursor over two elements in succession, it provides intersection points of the two elements, normal projections from points, and other points that can be selected to create new geometry.

The example below shows the intersection points of the line and the circle and the end and center points of the line simply by moving the cursor first to the circle then the line. The round target points can be selected for use as if they were permanent points:



Note that **Display Tips** are also on. **Display Tips** gives information about elements that typically must be found in FK **Analysis**

**CADAM Cursor**, **Display Tips** and **Preselect Highlight** are available from the **View** pull-down menu:

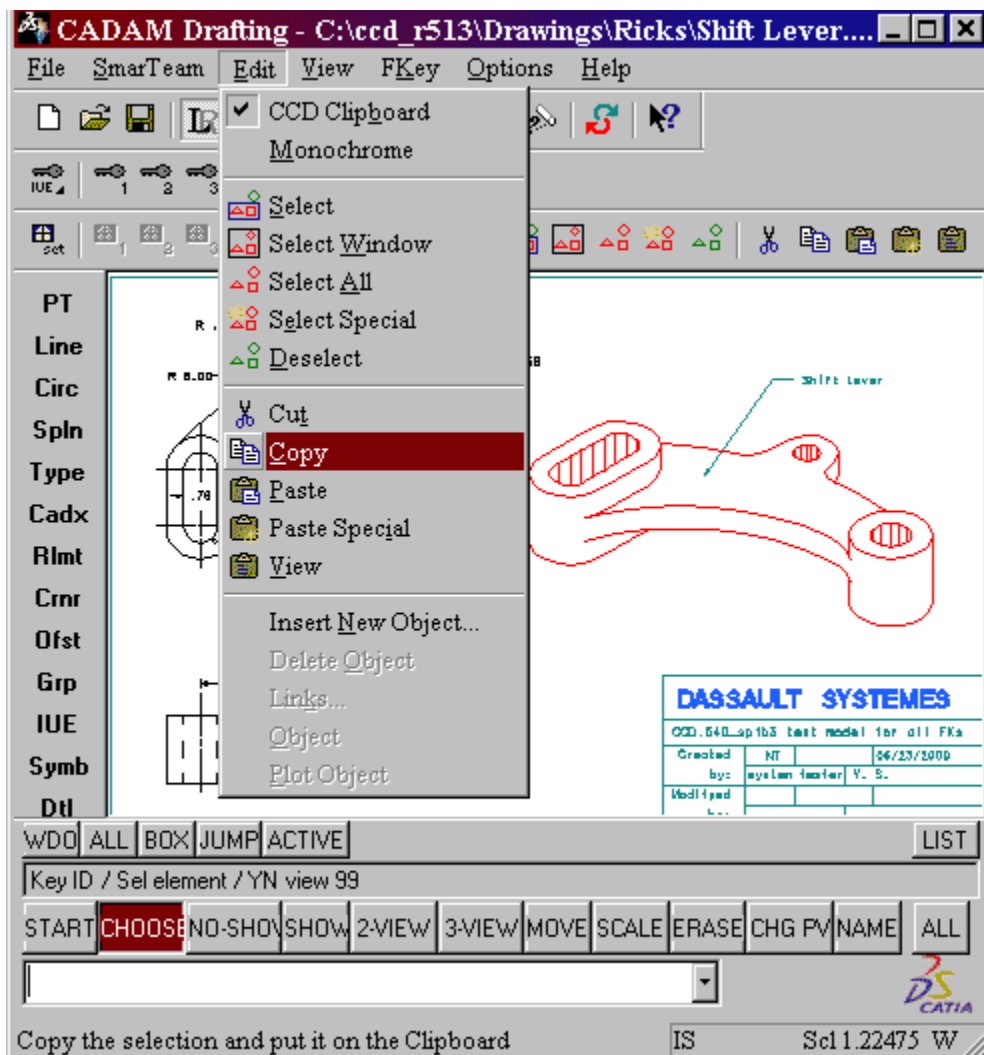


## Centerlines:

Centerlines can be quickly added to circles and ellipses by going to *FK Line, /CNTR/*, and selecting the circle or ellipse. Crossing centerlines are automatically placed. You can key in a different angle or you can *Indicate* to change the lengths of the crossing centerlines symmetrically.

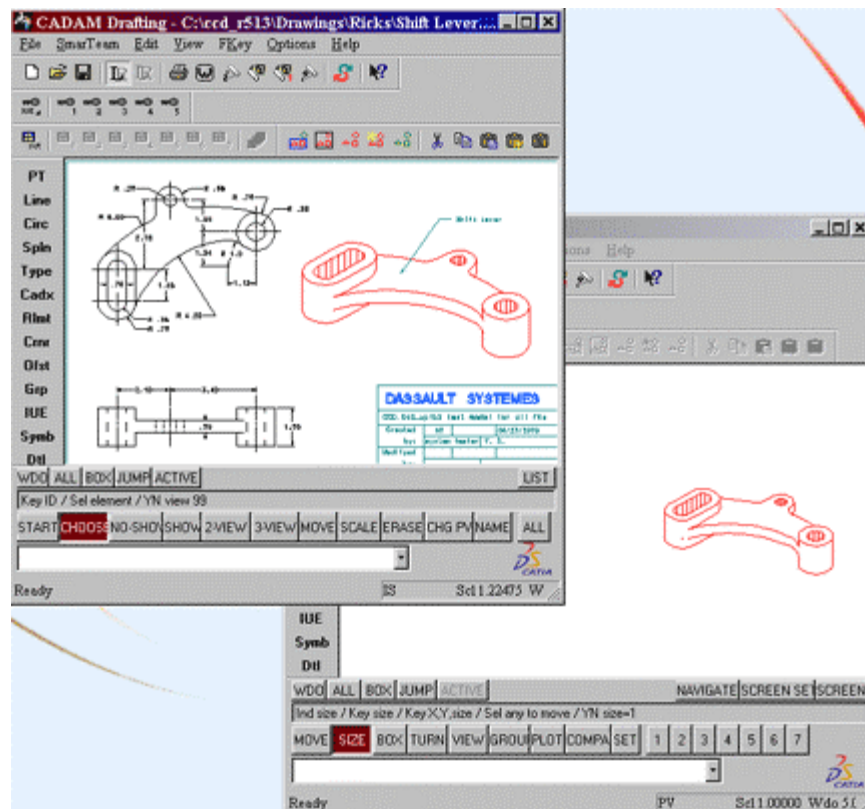
## Cut and Copy between sessions:

You can cut and copy CCD elements between CCD sessions by using the CCD Clipboard. Ensure the **CCD Clipboard** option is selected in the **Edit** pull-down menu. Select the desired geometry using the **Select** menus or icons (**Select**, **Select Window**, **Select All**, or **Select Special** which gives you all of the FK Group /TRAP/ options). Select **Copy** from the **Edit** pull-down menu to copy the elements to the CCD clipboard.



Once copied to the CCD Clipboard, CCD geometry can be pasted to another CCD drawing by using the options **Paste** or **Paste Special**. **Paste Special**

allows you to paste the geometry in a specific location and allows you to decide on what layer geometry should be pasted. Bring up a second CCD session and select **Paste** or **Paste Special** from the **Edit** pull-down menu.




## Offset:

Key in multiple offsets with either offsets of differing sizes or as many as 10000 identical offsets. Go to *FK Offset*. Indicate a side or YN offsets on both sides of the element. Either key in 5 unique offsets separated by commas or key the number of identical offsets followed by the @ sign followed by the size of the offset, e.g., 25@.1 will produce 25 identical offsets of 0.1 width.

## **Grouping:**

### **Create a temporary group:**

Depress the left mouse button until the  cursor appears. Drag a rectangle and all of the elements inside the rectangle will become a part of the temporary group. All normal group operations such as translate, scale, erase, and many more now become available to this group. (Requires Mouse Advanced Button Functions to be enabled.)

### **Group operations:**

The following group operations are available at any time by depressing the right mouse button in any open space until the following menu appears:



(Requires Mouse Advanced Button Functions to be enabled.)

# Panning and Zooming:


## Call existing drawing:

Normally when bringing up an existing drawing, it is displayed at window coordinates 0,0 and size = 1. If you would prefer a drawing be brought up at different location and view, simply store that in the *Window SET 1* position. To store up to 7 distinct window set positions, first set your window to the position you would like to save, and go to the *Window SET* toolbar.



Select the **set** window icon then select any of the 7 window icons. Only the first window set will be used when the drawing is called. Any of the stored positions can be recalled by selecting the appropriate window number icon at any time.

## Pan:

Press the center mouse button down until this cursor  appears. Continue to hold down the mouse button and pan as you move your mouse. (Requires Mouse Advanced Button Functions to be enabled.)

## Pan:

Press the *Shift* key and depress cursor keys to pan window.

## Zoom:

Zoom the window by spinning the wheel on a scroll mouse.

## Zoom:

Press the *Ctrl* key and depress the up and down cursor keys to zoom the window.

## Zoom:

Press the first and second buttons of a three button mouse to zoom the window.

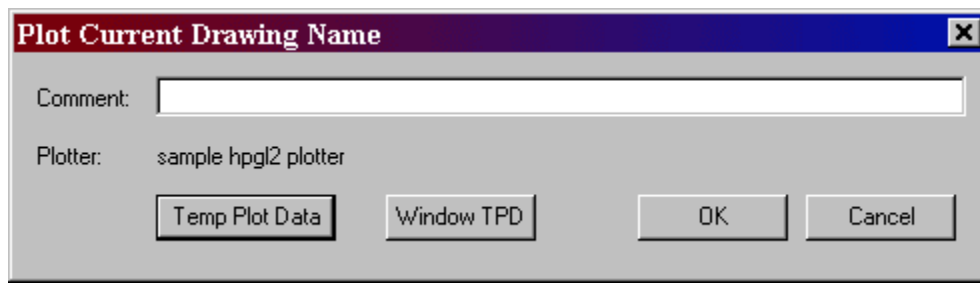


## **Print/Plot:**

### **Plot Current:**

You can quickly plot either what is on your current CCD window or create temporary plot data (TPD) to adjust the parameters of the plot. **Plot Current** differs from **Print** and **Print Wdo-TPD** in that it plots to the currently defined plotter (that may or may not be a Windows printer), and you can define a TPD to be used for the current plot only. **Print** and **Print Wdo-TPD** always print/plot to a Windows printer.

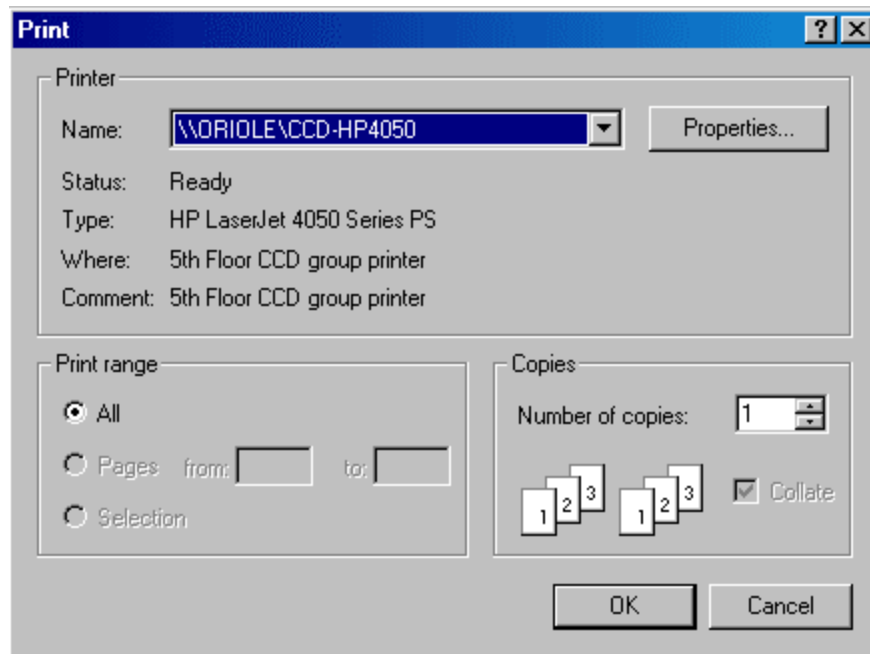
Select **Plot Current** in the **File** pull-down menu. The following panel will appear:





Select **Temp Plot Data** to bring up the dialog that allows you to change the parameters of the plot including the plot height and width dimensions, scale, load point, etc. When satisfied, YN accept temp plot data and the plot will be automatically submitted. If you select **Window TPD**, what you see in the current CCD window will be plotted. In all cases, the plot will go to the plotter defined in the **Plot Setup** (also available in the File pull-down menu).

### **Print Current Drawing:**

You can quickly print either what is on your current CCD window or use any plot data you may have defined. **Print** is a shortcut method for creating CCD plots. **Print** will always go to your Windows printer and not to any plotter defined by **Plot Setup**. Go to the **File** pull-down menu and select either **Print** or **Print Wdo-TPD**. **Print** will print whatever is in plot data (if defined), and if plot data is not defined, it will print the equivalent of a FK Window /ALL/. **Print Wdo-TPD** will print what is currently displayed on the CCD window. It automatically creates the TPD (temporary plot data) for you. As with most Windows applications, selecting these options from the **File** pull-down will bring up the **Print** properties panels, which will allow you to select a printer and to define properties associated with that printer.

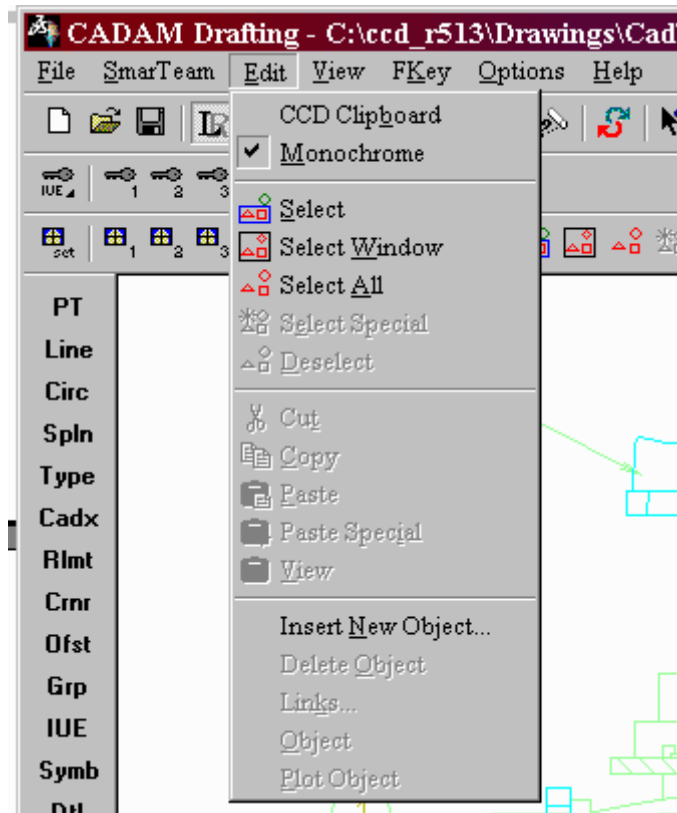


Selecting the equivalent toolbar buttons for **Print**  and **Print Wdo-TPD**  will bypass this panel and will print the drawing to the currently selected printer using the currently defined properties.

## **General:**

### **Exporting CCD Images to Other Applications:**

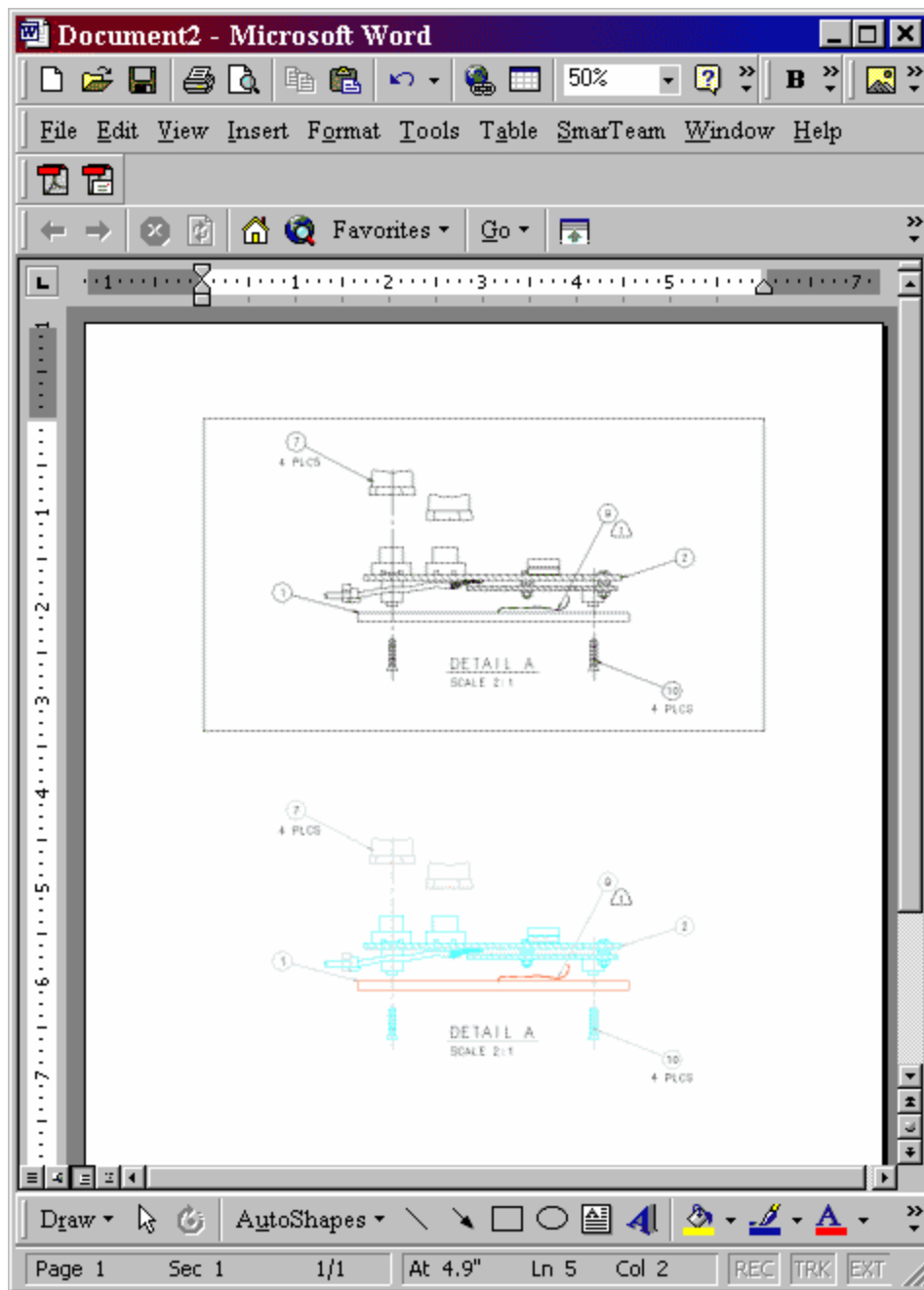
You can copy selected CCD images to other Windows applications. You have a choice of exporting these images either in color or in monochrome. Select the **Edit** pull-down menu and you will see the following panel:



Here, you have the choice of selecting the **CCD Clipboard** or the standard Windows clipboard. The CCD Clipboard allows you to copy actual CCD geometry from a CCD drawing to another CCD drawing. The Windows clipboard is for applications other than CCD, and the image is a bitmap (raster) rather than actual CCD elements. To choose the standard Windows clipboard, make sure that the **CCD Clipboard** is not selected.

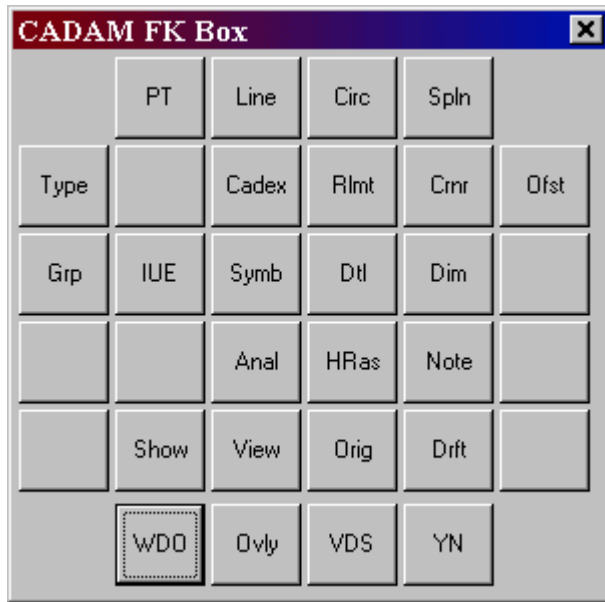
Next choose whether you want the CCD images to be exported in color or in monochrome by either selecting **Monochrome** or ensuring it is not selected (color). Now you have the choice of either selecting CCD elements using a rectangular trap box (**Select**), selecting all of the CCD elements displayed in the current window (**Select Window**), or selecting all of the elements that can be displayed by going to a **FK Window /ALL/** (**Select All**).

Now you can start another application and import the CCD image using the normal **Paste** command. The following shows a CCD image pasted as both a monochrome and a color image:



## FK Box:

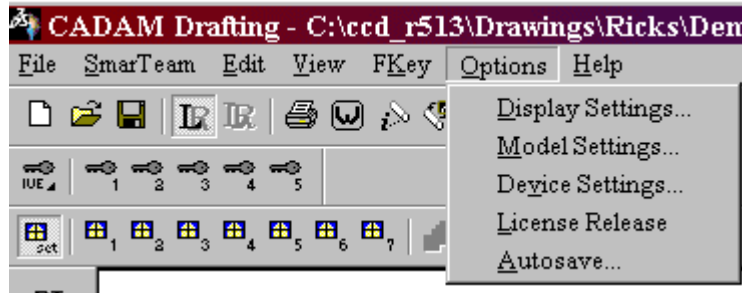
Double click with the left mouse button and the following virtual FK box will display:



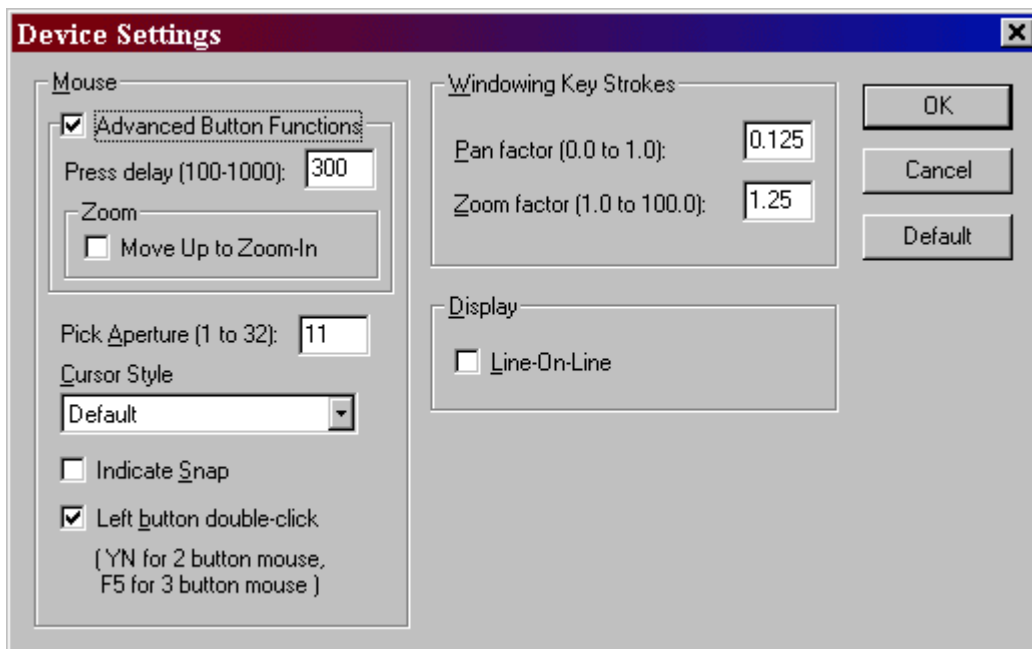
Select the desired FK button. The **WDO** FK always appears exactly where you double click.

## Mouse Advanced Button Functions:

Go to the *Options* pull-down menu and select *Device Settings...*



You will see the following panel:



Ensure that the **Advanced Button Functions** box is checked. The **Press delay (100-1000)** parameter defines the length of time you need to hold down the mouse button before the optional function becomes available. The factory setting is 400 milliseconds. Experiment with the setting to see what works best for you.

## Object Linking and Embedding:

Files, including Microsoft Word files or even pictures of sail boats can be embedded in a drawing with a link to the application that can modify it. These objects become a part of the actual CCD model.

CADAM Drafting - C:\ccd\_r513\Drawings\Ricks\cursor\_cover\_rl.cdd

File SmartTeam Edit View FKey Options Help

The technical drawing shows a top view and a side view of a cover. The top view is a square with a total width of 2.000. It features a central square hole with a diameter of  $0.480 \pm 0.002$  and four smaller square holes at the corners. Dimensions include a distance of 0.625 from the center to the edge, a distance of 0.003 from the center to the inner edge, and a distance of 0.002 from the center to the outer edge. The side view shows a thickness of 1.00 and a diameter of 0.50. It features 13 grooves on each end, with a radius of 0.093 R. and 0.070 R. TYP. The drawing includes a note: ".074 ± .003 DIA. 0.330 DEEP 1° INCREASING DRAFT PILOT HOLE. 2 PLACES." and a reference to "SEE DETAIL D".

The photograph shows the physical cover, which is a white, curved, rectangular object with a central hole and four corner holes. It is mounted on a metal stand and is surrounded by scaffolding. The background shows a building and a clear sky.

120891- A

7ND	18/18/96	
ASS. CYCQLAC. GRADE 1		COVER, CURSOR
3 4 5		120891- A WFG

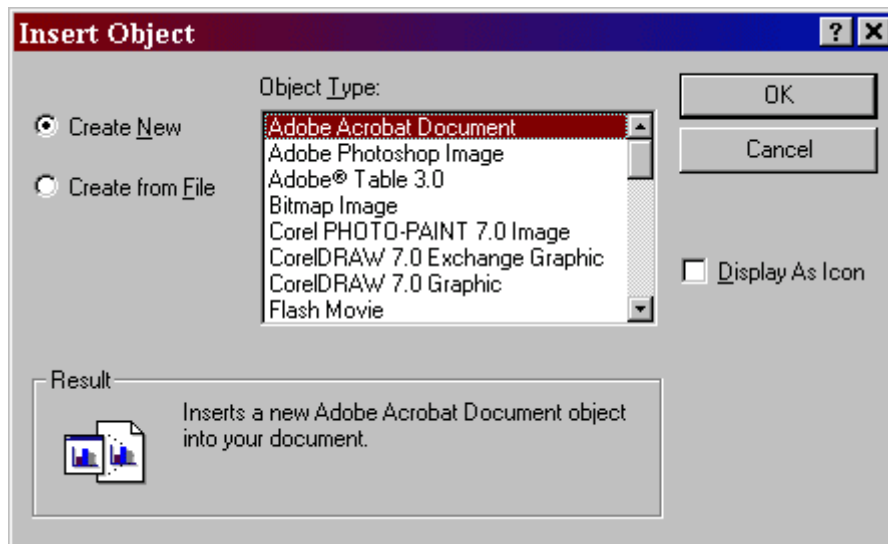
WDO ALL BOX JUMP ACTIVE

Sel menu / Sel ditto Name= Detl#=25 WSwds=561 Ditto cnt=0

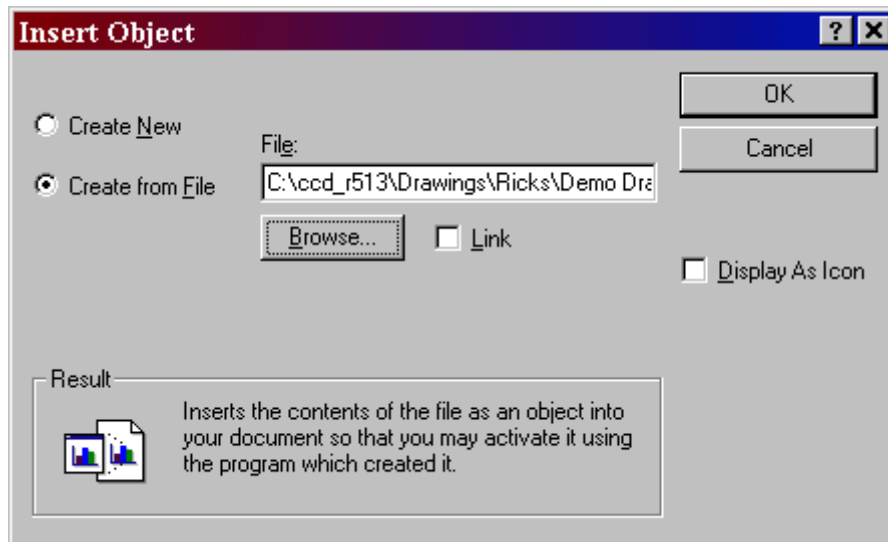
START COPY IMPORT SHOW USE DITTO TRANSFER THUMBNAILS

Ready PV Sc11.00000 Wdo 3.37443, 00000 IN: 0.235, 5.731

To embed a file go to the **Edit** pull-down menu and select Insert **New Object**. The following panel will appear:



Select **Create from File**. It will give you the following panel:

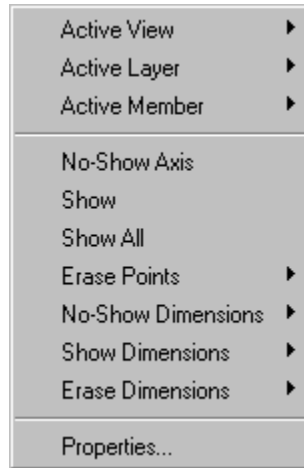


Here you may **Link** to a file or embed a file. If you choose to link a file, when you double click on it in CCD, it will bring up the application that created the file. Any changes you make to the file (if saved) will be reflected in the CCD drawing and will be reflected in the original. If you choose not to link a file, it will be embedded. An embedded file when double clicked in CCD will bring up the application and allow you to change the file, but it will not necessarily change the original file. Selecting Browse from the above panel brings up the directory browser and allows you to choose a file. CCD also allows you to break a link meaning changes to the original file will not be reflected in the CCD drawing.

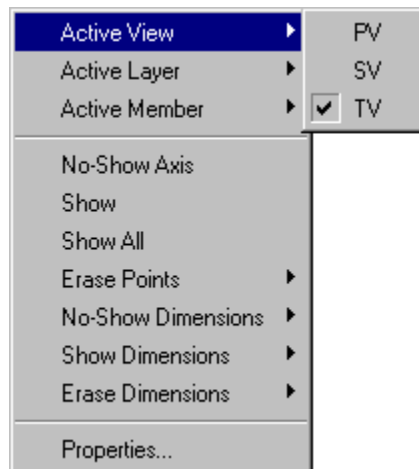


## Overlays, Views and Layers:

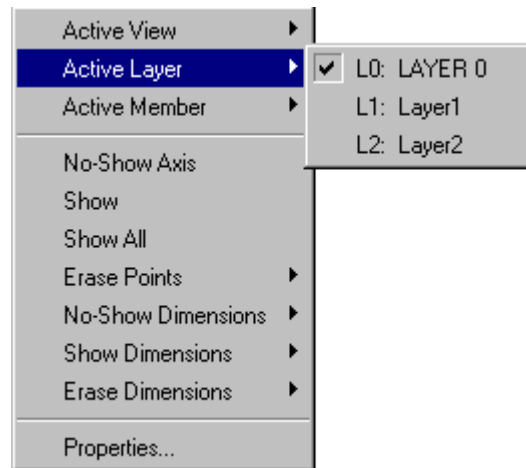
When you have a drawing with Overlays, Views and Layers, you can press the right mouse button in any open space, and you will see the following panel:



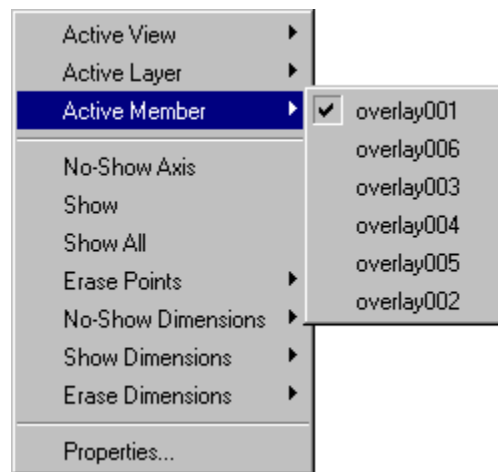
Moving your cursor over **Active View** produces the following sub-panel where you can choose to activate a different view if desired:



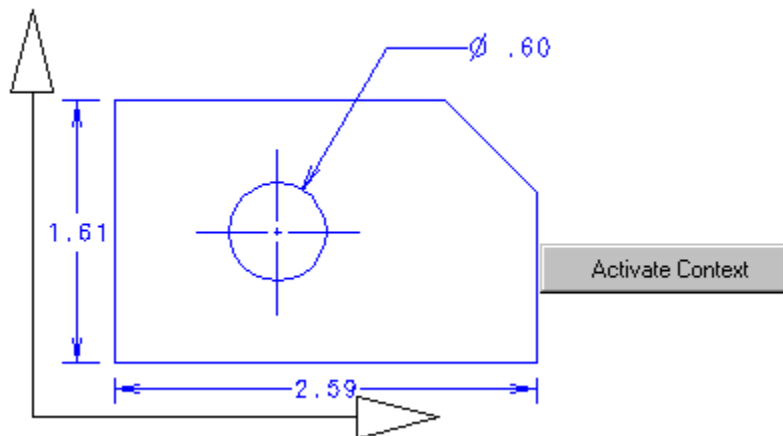
Moving your cursor over **Active Layer** produces the following sub-panel where you can choose to activate a new layer if desired:



Moving your cursor over **Active Member** produces the following sub-panel where you can choose to activate a new overlay member if desired:



Right-clicking on a member of an inactive view, overlay, or layer produces the following option.



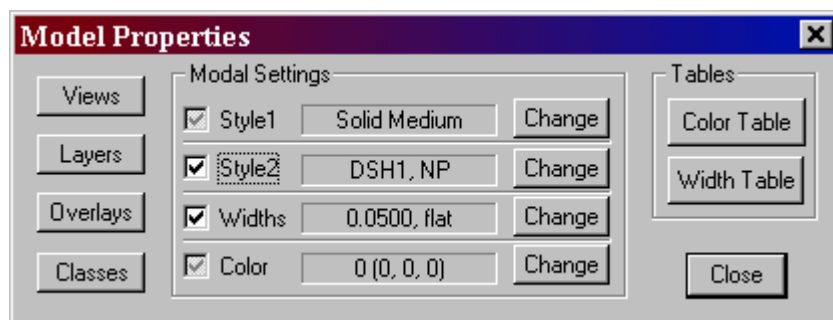
Selecting the **Activate Context** option activates the view, layer and overlay member of that element, allowing you to combine up to 3 possible activation operations into a single operation.

## Properties:

Press the right mouse button in any open space until the following panel appears:

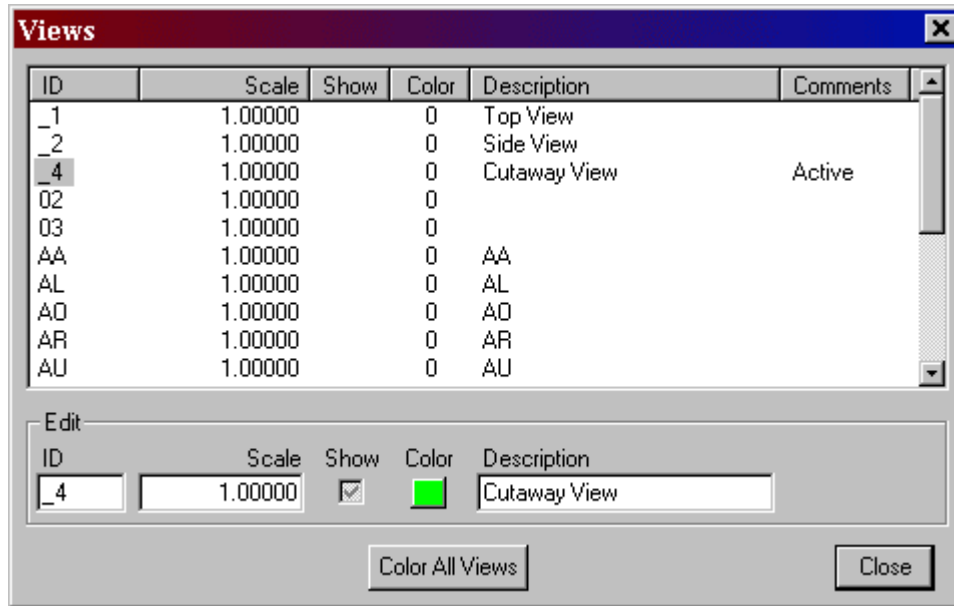


Select **Properties...**, and the following will appear:



This panel allows you to manage many of the properties of a model.

Selecting the **Views** button gives the following:



Parameters associated with views can be easily evaluated and modified using this panel.

Choosing the **Layers** button provides a convenient way to manage all of the properties of layers:

**Layers Management**

Create

Name:

Show  Pick

! => indicates buttons that take immediate action

OK

Cancel

The Add!/Update! button updates the model with the new layer and any modified settings

Modify

Num	Name	Color	Line Style	Show	Pickable	Comments
0	Conduit	0 (BLACK)	Style1 Solid Med	Yes	Yes	
1	Electrical	1 (RED)	Style1 Solid Med	Yes	Yes	Active
2	Hardware	3	Style1 Solid Med	Yes	Yes	Empty

New Name

Color All  Color Active

Filter

Filter Enabled  If filter definitions change while the filter is enabled, hit the Update List button to apply the new filters

ignore case

Layer Names

Layer Numbers

Layer Colors

Layer Line Styles

Show

Yes

No

Either

Pick

Yes

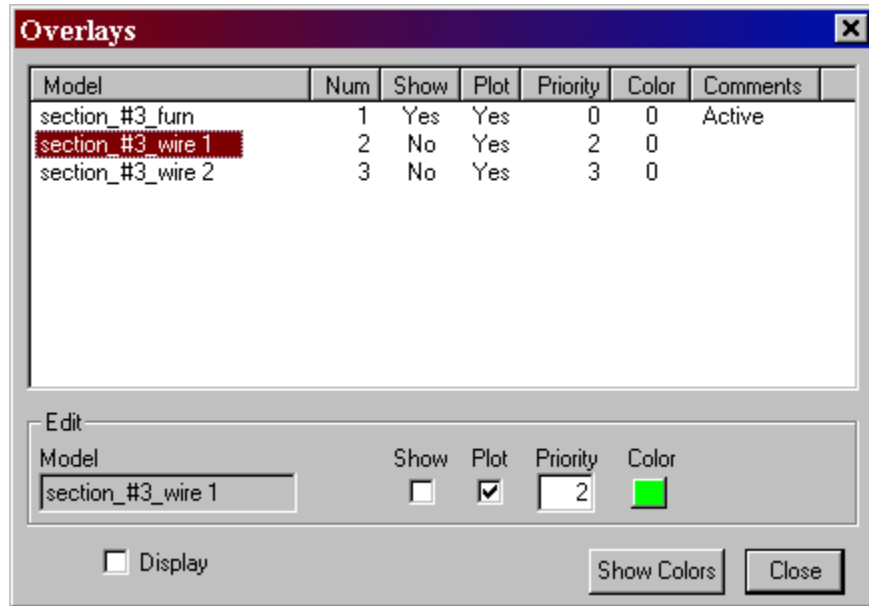
No

Either

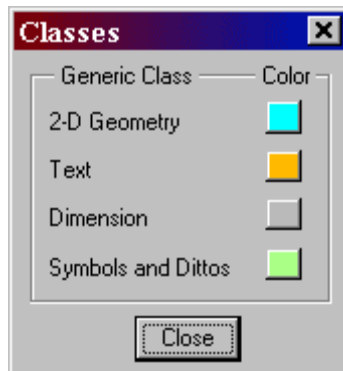
Filters can be defined in the following ways:  
 wildcards: \* substitutes for 1 or more characters  
 range: alphanumericstring1-alphanumericstring2  
 text: abc (this will find an exact match of abc)

Each filter will act to exclude any string that does not match its pattern. However, if a field has multiple filters, these filters will act to include matching strings. Multiple filters are separated by commas.

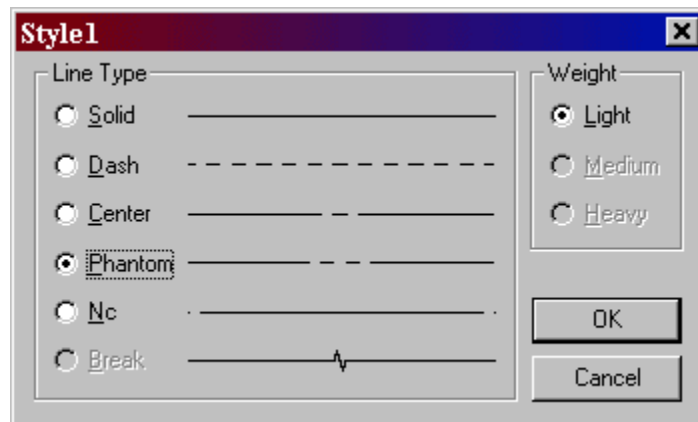
Choosing the **Overlays** button brings up the following panel:



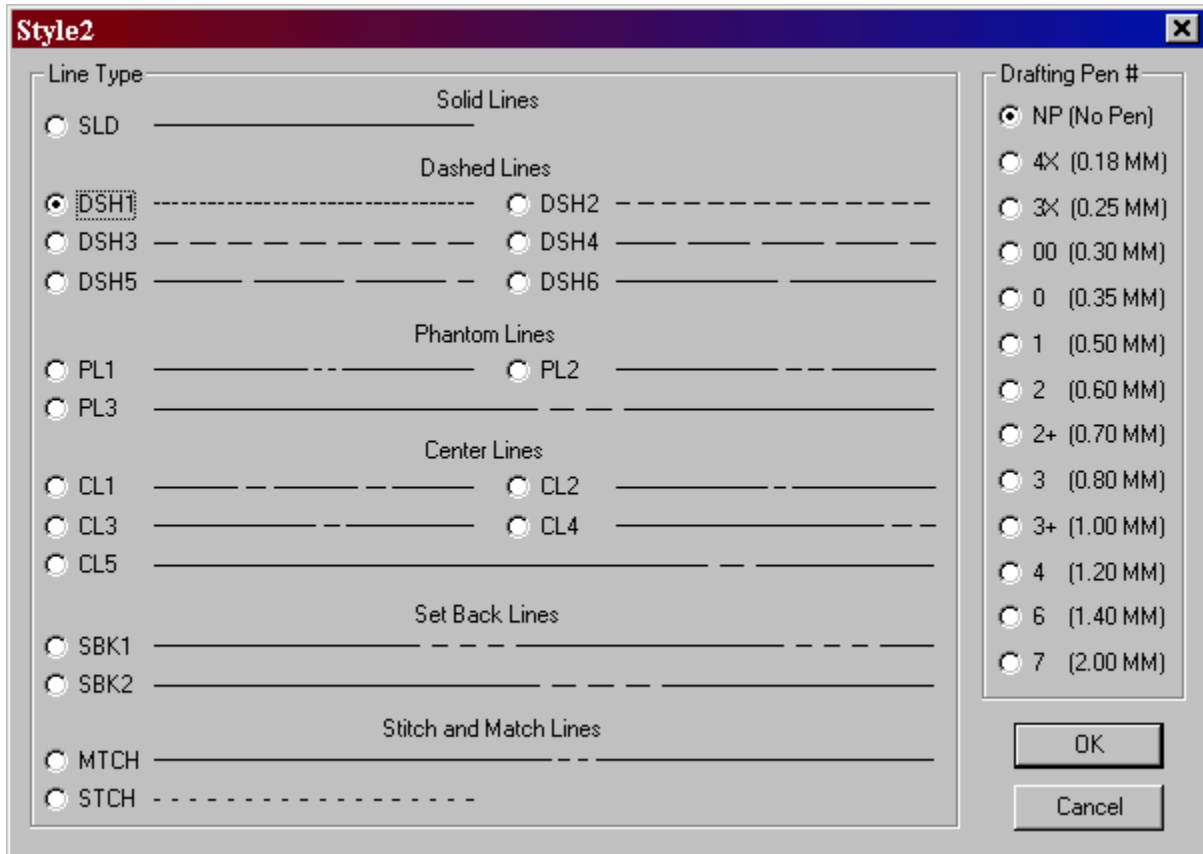
Choosing the **Classes** button brings up the following panel:



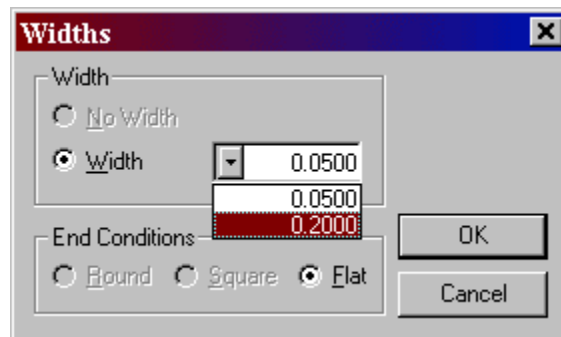
Choosing **Style 1** and selecting **Change** brings up the following panel and allows you to change the Style 1 modal setting. That means all elements selected after the change will reflect the change in Style 1 type.



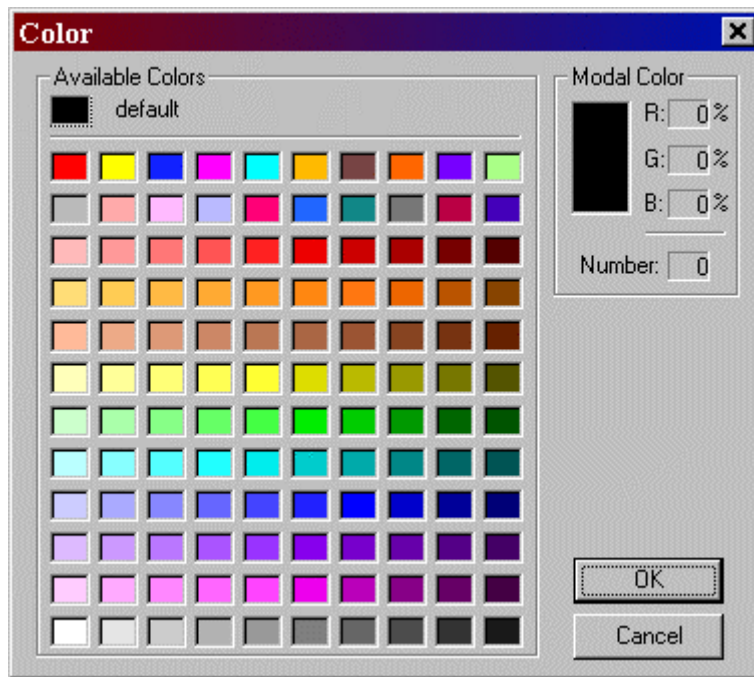
Choosing **Style 2** and selecting **Change** brings up the following panel and likewise allows you to change the Style 2 modal setting.



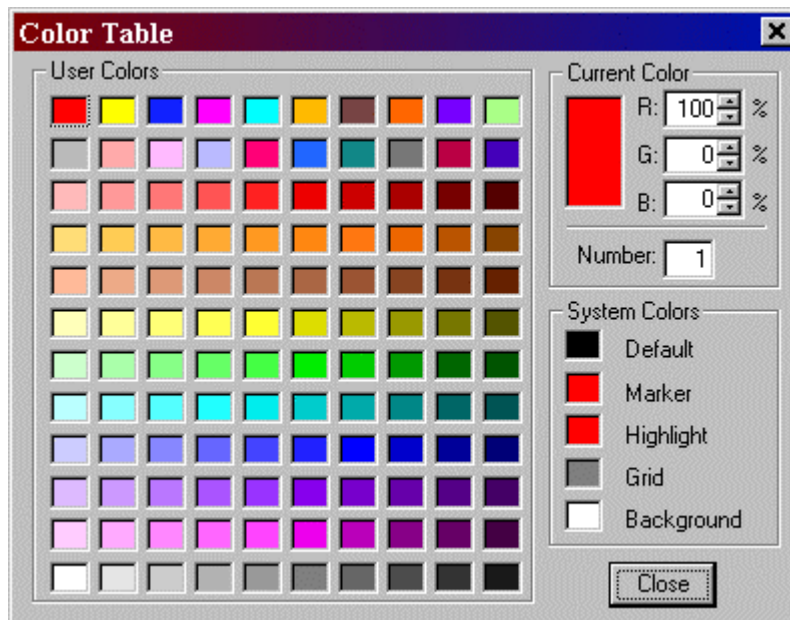
Choosing **Widths** and selecting **Change** brings up the following panel and allows you to change the modal line width setting.



Choosing **Color** and selecting **Change** brings up the following panel and allows you to change the modal default color setting:

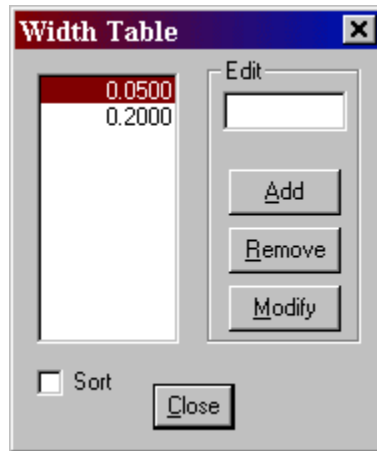


Selecting **Color Table** brings up the following panel and allows you to change the system colors.



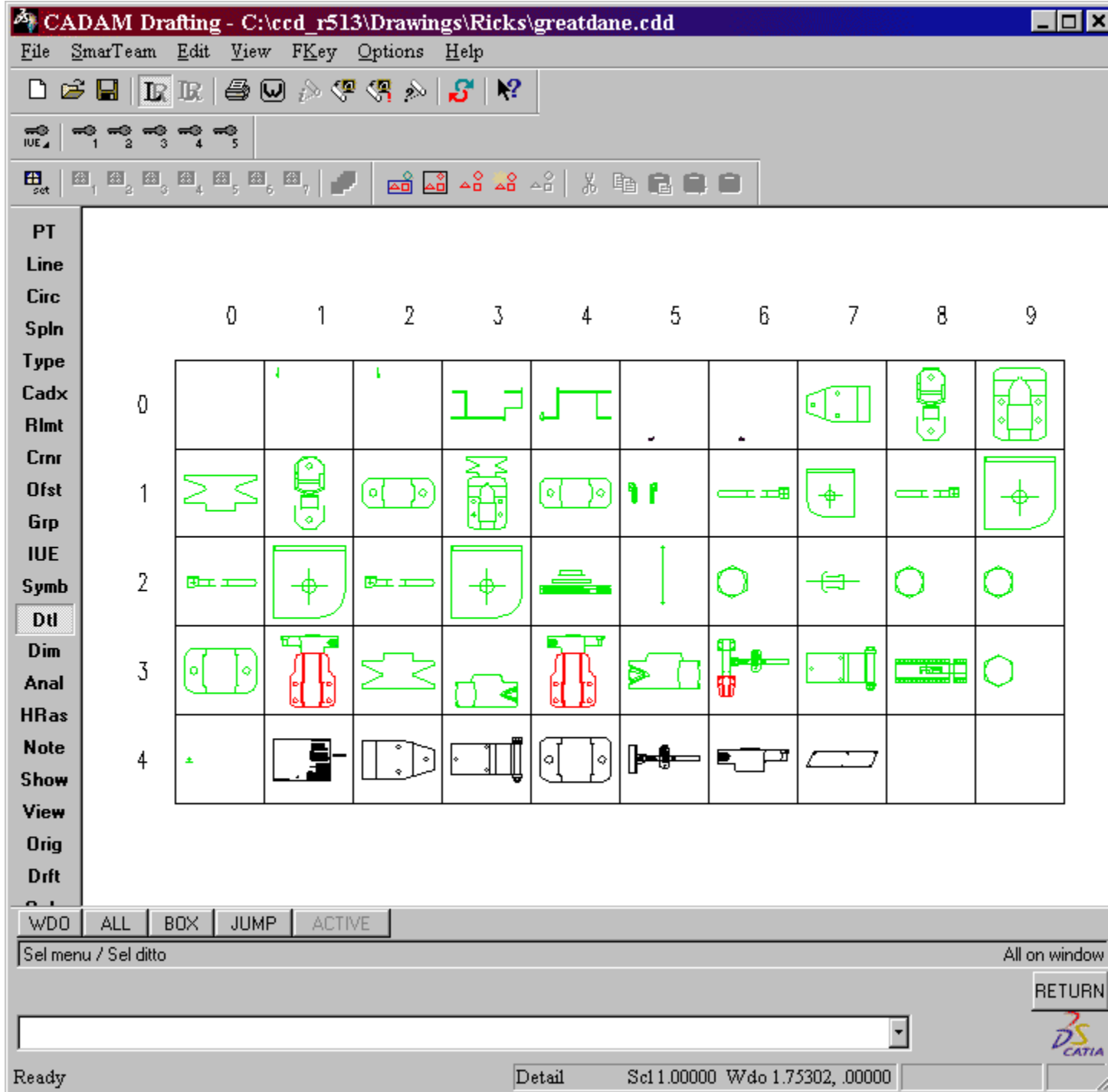


Selecting **Width Table** allows you to define different widths by bringing up the following panel:



## Thumbnails (details):

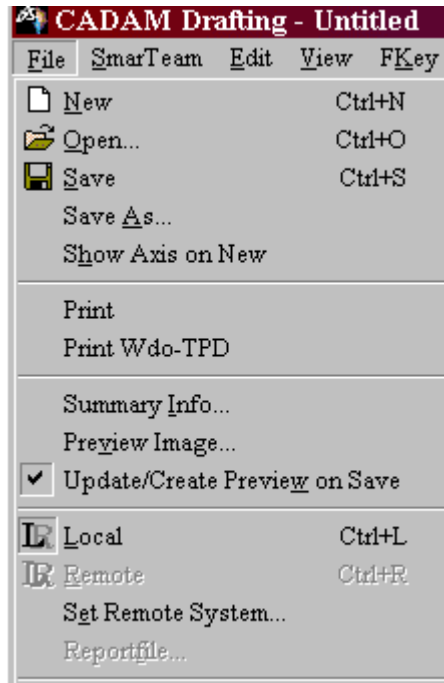
To see a thumbnail of every detail in a drawing, go to FK Detail, /THUMBNAILS/, and all of your details are displayed, as in the following:



Select the desired detail and choose either /USE/ or /DITTO/, and apply the detail as you normally would.

## Thumbnails (drawings):

To see thumbnails of drawings when you open them using the File Open... dialog, make sure you check the *Update/Create Preview on Save* box in the *File* pull-down menu.



The following shows a thumbnail of a drawing that has been saved.

**Open** [?] [X]

Look in:  [Back] [Up] [Down] [Refresh] [Grid]

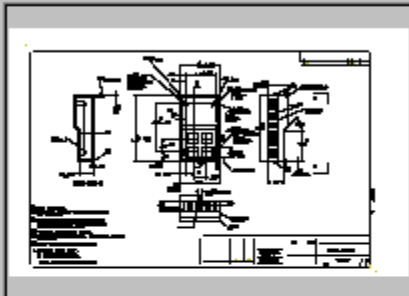
Bob's	rv park.cdd
Demo Drawings	shed.cdd
sps	Shift Lever.cdd
bobs_layers.cdd	Shift Lever_r1.cdd
<b>cursor_cover_r1.cdd</b>	Shift Lever_r2.cdd
dassault.cdd	Shift Lever_r3.cdd
Gear.cdd	test.cdd
greatdane.cdd	Tracks.cdd
IUE Spec.cdd	wds_install_test.cdd
IUE Spec_r2.cdd	
IUE Spec_r3.cdd	
IUE Table.cdd	
outsidebox.cdd	
Raster demo.cdd	
Raster demo_r1.cdd	

File name:

Files of type:

**Model Information**

Preview:



Model Text:

Increased Precision

Plot Data