

# AdivaView Graphical User Interface (User Guide)

# Notice

Representations in this User Guide are meant as an overview and quick reference. Full details can be found in the On-Line manuals located at the *ADIVA Corporation* website - [www.adiva.com](http://www.adiva.com)

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# AdivaView Graphical User Interface Highlights

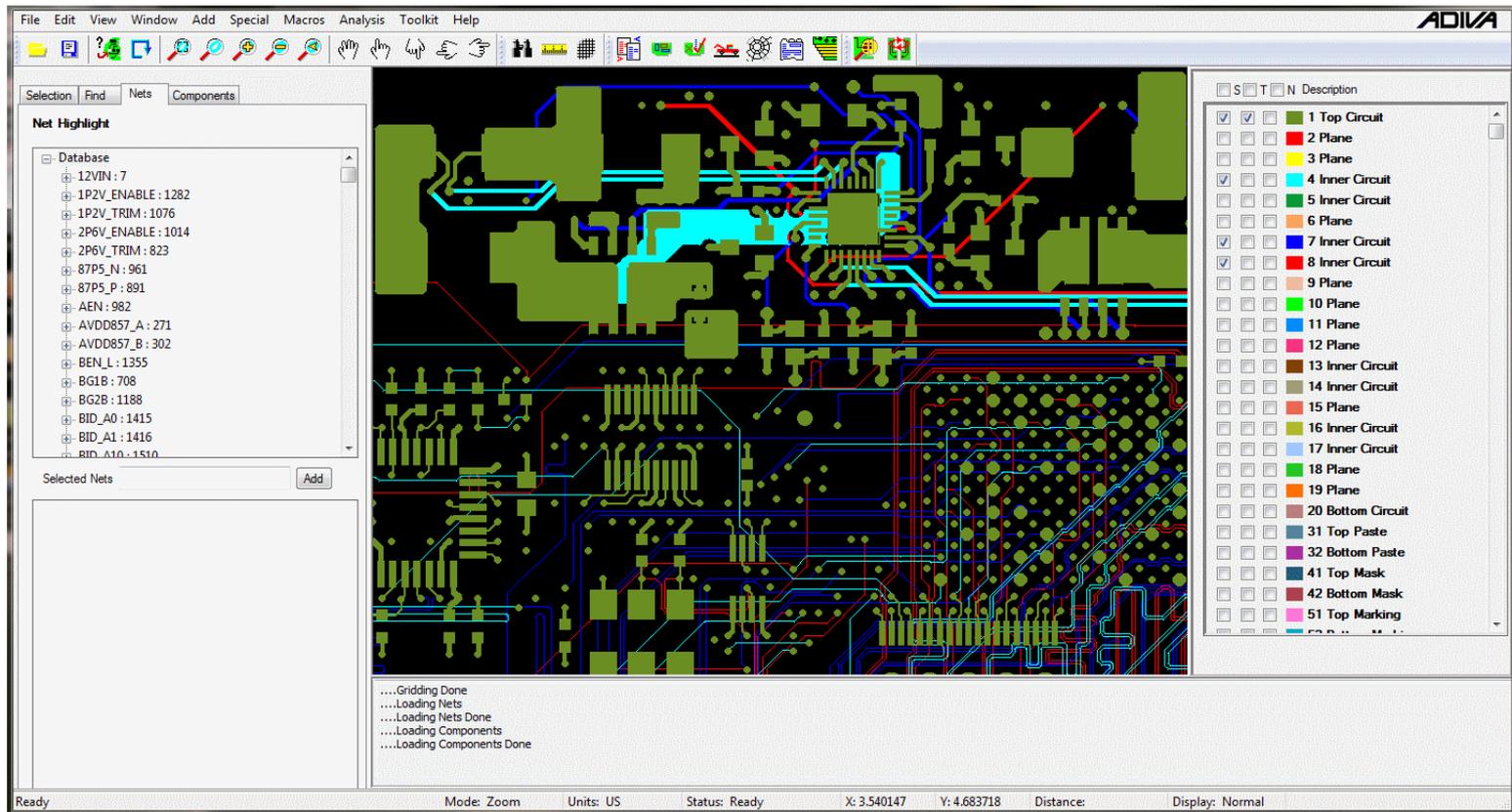
- Layer display checkbox also makes the layer active for item selection (different from AdivaTools DRC).
- Layer Display and Action Display are both dockable panels. They can be moved to different locations to create a larger viewing area for a design.
- All data created automatically by Adiva is stored in the local directory for a particular job.

# Starting the AdivaView Interface

On the Windows Desktop, double-click the AdivaView icon

On the command line, type `>AdivaView -V <jobname>` (jobname is optional)

The graphical Interface will appear and if a jobname is supplied it will appear like below.



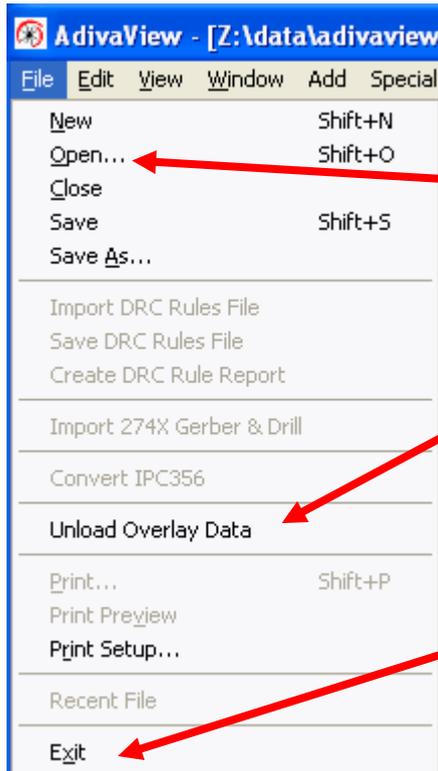
If a job name is not supplied, the Layer Listing on the right will be empty and the next step will be to access the File menu to find and load a job.

# Menu

Across the top of the AdivaView Graphical Interface are a series of menus. Several of the menu items are inactive for AdivaView therefore not listed in this guide



The File Menu performs the following....



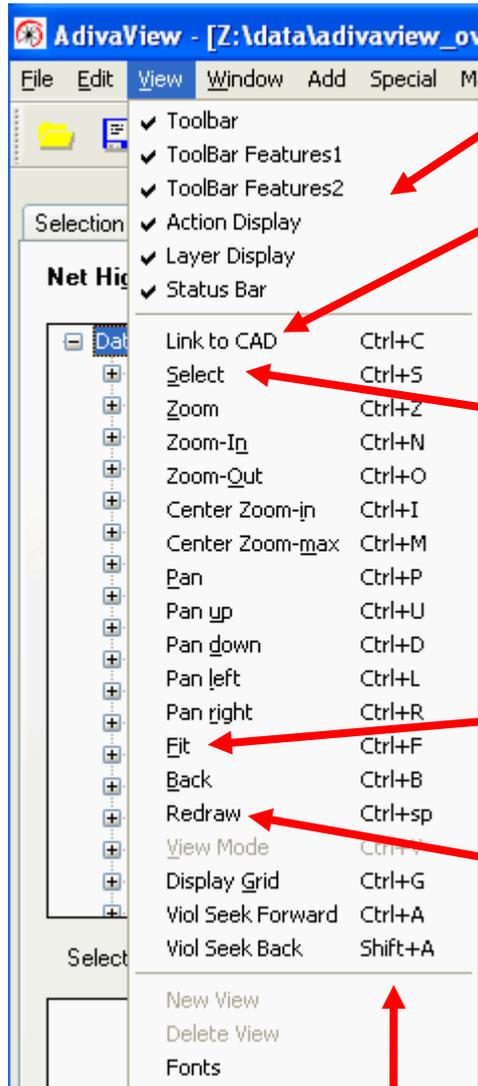
Select and Load an existing database

Removes an added database used for either revision compare or design review (ex: Rev A or Rev B, etc...).

Exit and close AdivaView

The View Menu controls various graphical related functions.

Take close note of the keyboard shortcuts that are also available for each function



These functions control display of toolbars and activity displays

Produces a file that can be used by certain CAD systems to center their screen to the Adiva screen

See the Item Select Function described later in this User Guide Essentially this function allows a user to select or un-select an item(s) on the screen

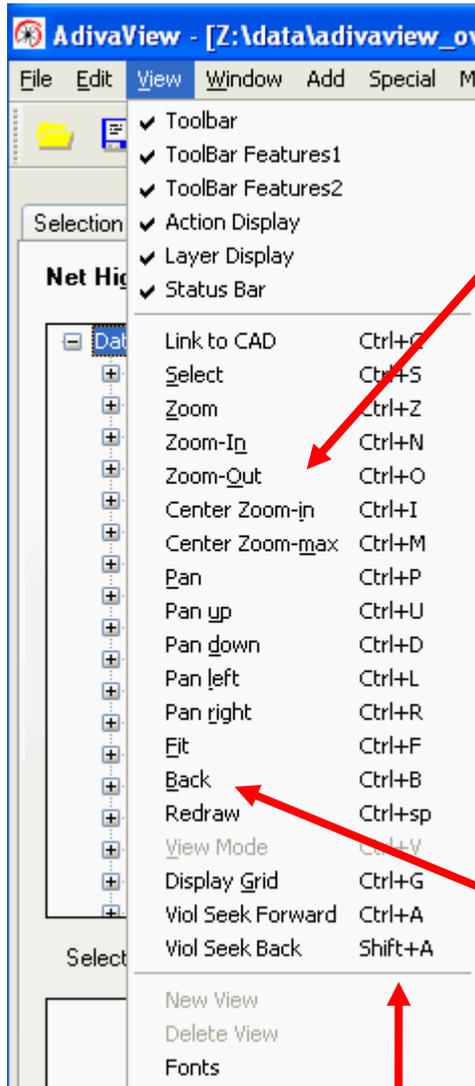
Center and fit all graphics on the screen

Refreshes the current graphics screen

Keyboard Shortcuts

The View Menu controls various graphical related functions.

Take close note of the keyboard shortcuts that are also available for each function



### Zoom Functions:

Zoom allows a user to draw an area to zoom  
click left-mouse down-drag-let go - defined area zooms in

Zoom-In allows a user to zoom in 1 level on the current screen  
Mouse Scroll-Up performs the same function

Zoom-Out allows the user to zoom out 1 level on the current screen  
Mouse Scroll-Down performs the same function

Center Zoom-In allows the user to zoom in 1 level centering on the mouse location

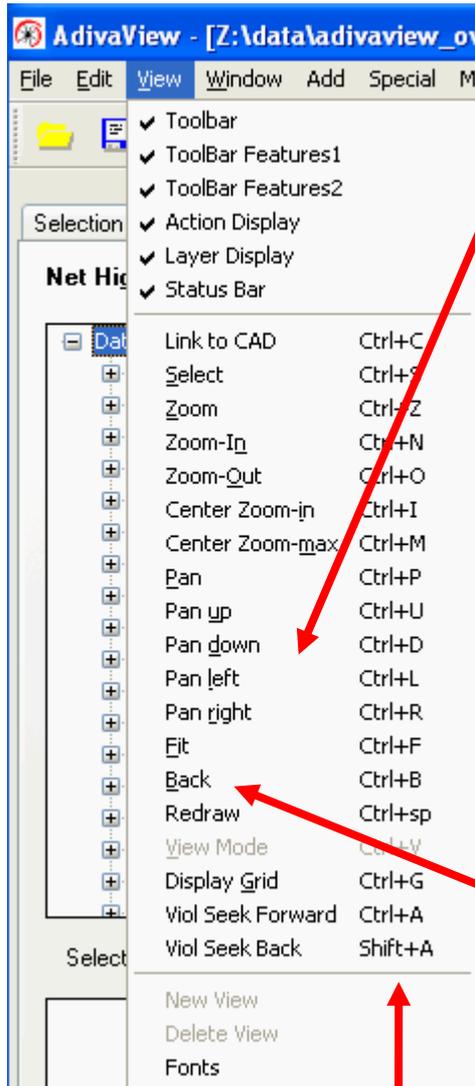
Center Zoom-Max allows the user to zoom in 8 levels centering on the mouse location

Back returns the user to the previous displayed screen

Keyboard Shortcuts

The View Menu controls various graphical related functions.

Take close note of the keyboard shortcuts that are also available for each function



### Pan Functions:

Pan allows a user to click left-mouse down on a location and drag a line to a new location (let go) then redraws the screen with the original location now in the new location.

In short: drag this point from here to here

Mouse scroll click-down-drag-release performs same function without placing user in "Pan-State"

Pan Up moves the current window-of-view 90% up

Pan Down moves the current window-of-view 90% down

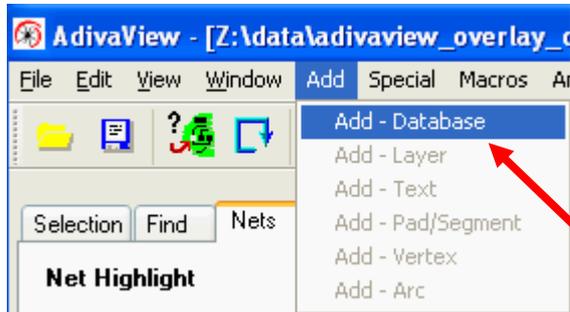
Pan Left moves the current window-of-view 90% to the left

Pan Right moves the current window-of-view 90% to the right

Back returns the user to the previous displayed screen

Keyboard Shortcuts

The Add Menu performs the following....



Select **Add – Database** to load a second or more databases on top of an already loaded database.

This is useful for revision review between two or more versions of the same design.

When selected, a Windows navigation dialog will appear allowing the selection of a second (or more) databases to be loaded for review.

See the **AdivaView Function User Guide** for application details.

## The Special Menu performs the following....

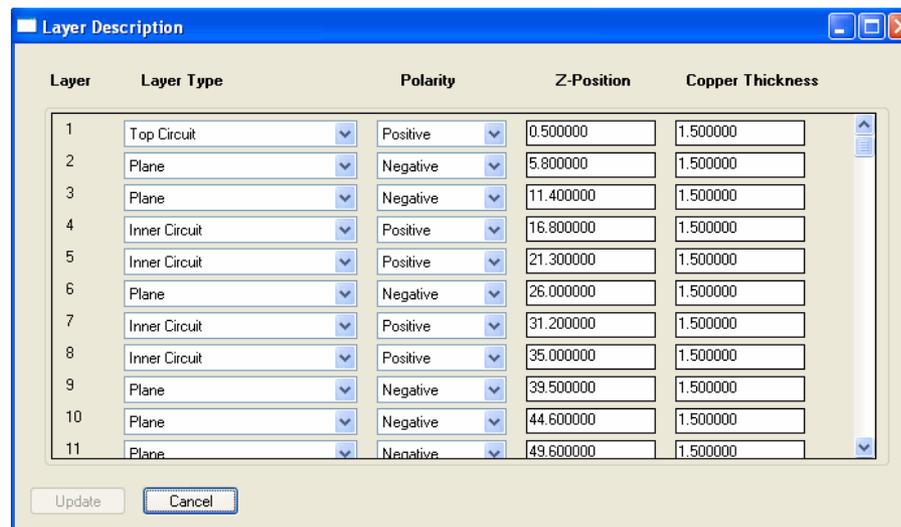


Measure provides a tool allowing the user to drag a line anywhere on the screen and a total distance from start to end is displayed in the status bar at the bottom of the Adiva Graphical Interface.

Select Measure > Left-Mouse down-drag-let go on the graphics screen

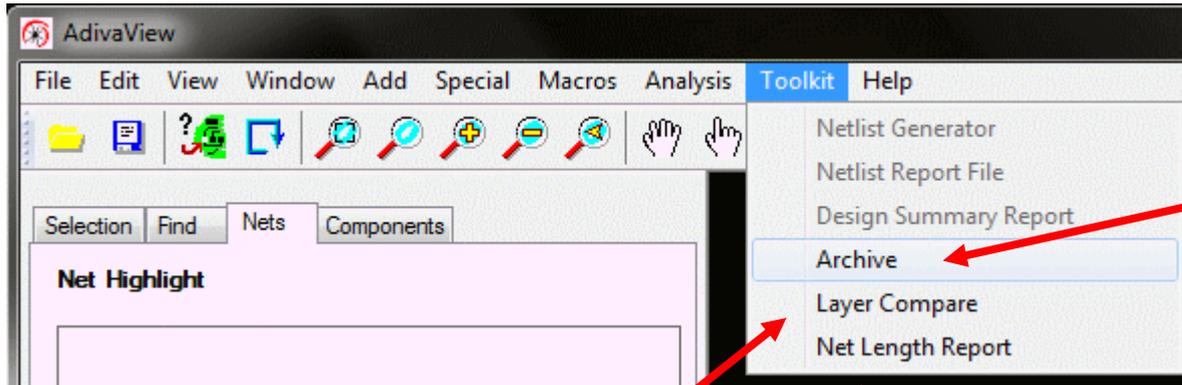
“Snap” option on the Selection Tab is helpful with this function

Layer Description displays the layer stackup as defined for this design. Select this and a dialog will appear showing a description of each layer and its Z-Position (distance from top) of each layer.



| Layer | Layer Type    | Polarity | Z-Position | Copper Thickness |
|-------|---------------|----------|------------|------------------|
| 1     | Top Circuit   | Positive | 0.500000   | 1.500000         |
| 2     | Plane         | Negative | 5.800000   | 1.500000         |
| 3     | Plane         | Negative | 11.400000  | 1.500000         |
| 4     | Inner Circuit | Positive | 16.800000  | 1.500000         |
| 5     | Inner Circuit | Positive | 21.300000  | 1.500000         |
| 6     | Plane         | Negative | 26.000000  | 1.500000         |
| 7     | Inner Circuit | Positive | 31.200000  | 1.500000         |
| 8     | Inner Circuit | Positive | 35.000000  | 1.500000         |
| 9     | Plane         | Negative | 39.500000  | 1.500000         |
| 10    | Plane         | Negative | 44.600000  | 1.500000         |
| 11    | Plane         | Negative | 49.600000  | 1.500000         |

The Toolkit Menu performs the following....



**Archive** generates a series of web based images that communicate graphical images of questionable or notable material.

See the **AdivaView Function User Guide** for application details.

**Net Length Report** creates a comma delimited file listing net length data by net name. This file can be loaded into a common spreadsheet program for review.

**Layer Compare** performs a function comparing any two layers of a design. This is a graphical Comparison allowing the user to “seek” to any differences between the two layers.

Multiple layers can be batched at one time for a complete design comparison. For instance, revision A of a design can be compared back to the original design determining any and all differences between the revisions. See the **AdivaView Function User Guide** for application details.

# ToolBar



## The ToolBar provides easy access to many functions that are duplicated by a menu selection or keyboard shortcut

Layer Compare - performs a function comparing any two layers of a design. This is a graphical comparison allowing the user to “seek” to any differences between the two layers.

Multiple layers can be batched at one time for a complete design comparison. For instance, revision A of a design can be compared back to the original design determining any and all differences between the revisions.

See the **AdivaView Function User Guide** for application details.



Flip – turns the design over for easy viewing from the backside. Selecting Flip again flips the design back over.

The message bar at the bottom of the screen reports the current state of viewing for the design – Normal - Flipped



The ToolBar provides easy access to many functions that are duplicated by a menu selection or keyboard shortcut

Archive generates a series of web based images that communicate DRC check violations.

See the **AdivaView Function User Guide** for application details.

Refreshes the current graphics screen



Closes and opens the Action Tab on the left side of Adiva's Graphical Interface. Closing this tab allows greater viewing area for a design.

Closes and opens the Layer Display Tab on the right side of Adiva's Graphical Interface. Closing this tab allows greater viewing area for a design.

The ToolBar provides easy access to many functions that are duplicated by a menu selection or keyboard shortcut

Refreshes the current graphics screen

Center and Fit all graphics on the screen



Back returns the user to the previous displayed screen

Zoom-Out allows the user to zoom out 1 level on the current screen  
Mouse Scroll-Down performs the same function

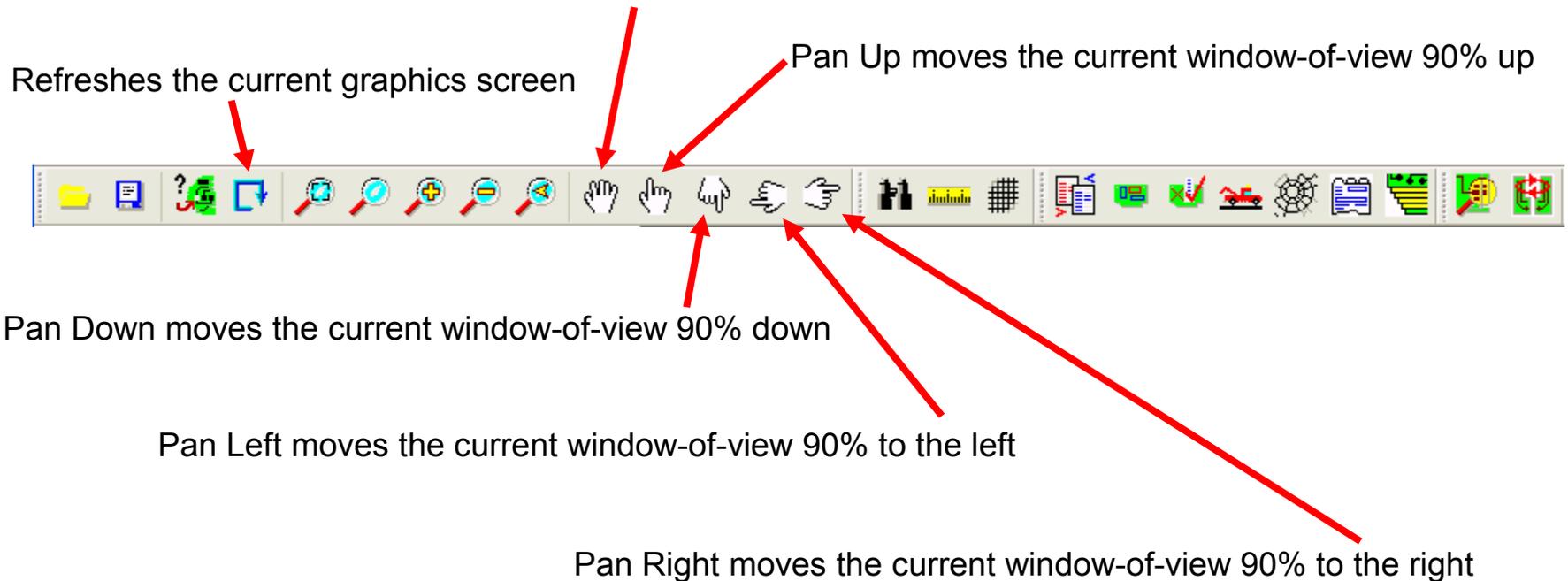
Zoom-In allows a user to zoom in 1 level on the current screen  
Mouse Scroll-Up performs the same function

Zoom allows a user to draw an area to zoom  
click left-mouse down-drag-let go -- defined area zooms in

# The ToolBar provides easy access to many functions that are duplicated by a menu selection or keyboard shortcut

Pan allows a user to click left-mouse down on a location and drag a line to a new location (let go) then redraws the screen with the original location now in the new location. Mouse scroll click-down-drag-release performs same function without placing user in “Pan-State”.

In short: drag this point from “here” to “there”



# Layer Display

# Layer Display List controls access to visual and physical selections of each graphical layer of a design

This is the “Show” column. Check this box to “Show” all layers on the screen. Uncheck this box to turn off display for all layers. (Screen refresh may be required to see selected layers)

Check individual boxes to show individual layers (Screen refresh may be required to see selected layers)

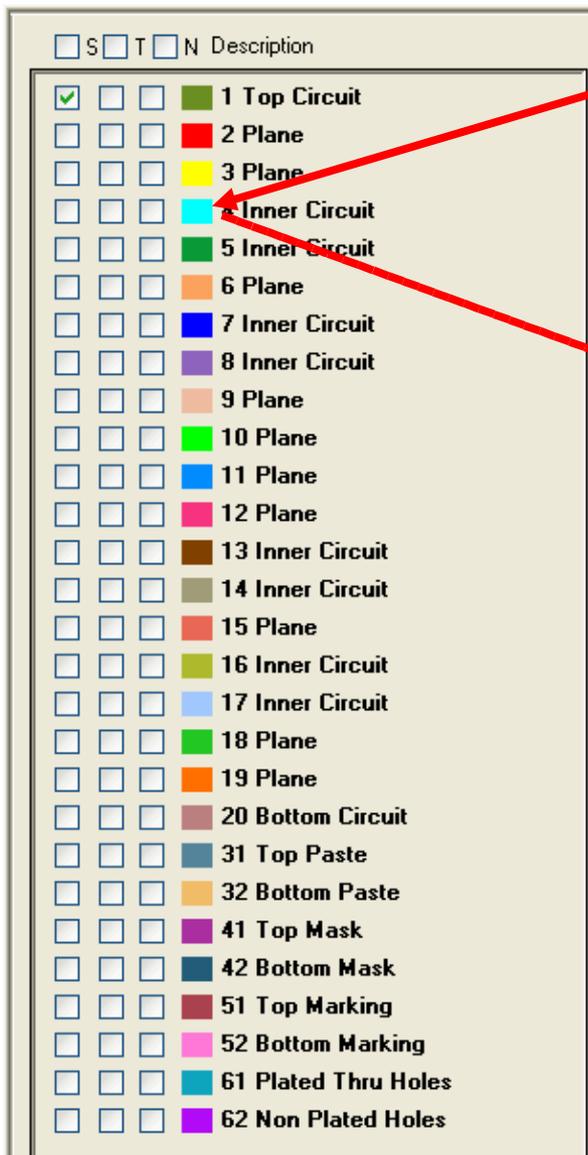
If a box is checked on for show, this layer also becomes “active” meaning items can be selected on that layer.

Checking a box in the 2<sup>nd</sup> column shows that layer on top of all other layers set to display (only one layer at a time can be on TOP) (screen refresh is automatic) *(TIP! It is sometimes handy to use this to redraw the screen when layer selections are changed)*

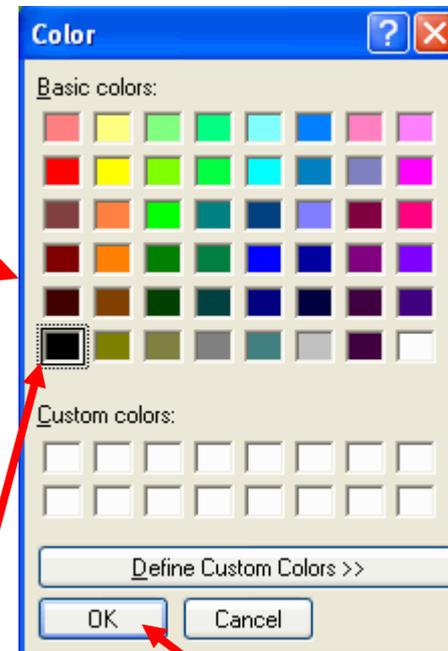
Checking a box in the 3<sup>rd</sup> column inverts the graphical image – useful in showing negative layers in their “real” view

| <input type="checkbox"/> S          | <input type="checkbox"/> T | <input type="checkbox"/> N | Description          |
|-------------------------------------|----------------------------|----------------------------|----------------------|
| <input checked="" type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/>   | 1 Top Circuit        |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 2 Plane              |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 3 Plane              |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 4 Inner Circuit      |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 5 Inner Circuit      |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 6 Plane              |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 7 Inner Circuit      |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 8 Inner Circuit      |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 9 Plane              |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 10 Plane             |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 11 Plane             |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 12 Plane             |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 13 Inner Circuit     |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 14 Inner Circuit     |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 15 Plane             |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 16 Inner Circuit     |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 17 Inner Circuit     |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 18 Plane             |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 19 Plane             |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 20 Bottom Circuit    |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 31 Top Paste         |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 32 Bottom Paste      |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 41 Top Mask          |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 42 Bottom Mask       |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 51 Top Marking       |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 52 Bottom Marking    |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 61 Plated Thru Holes |
| <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/>   | 62 Non Plated Holes  |

# Layer Display List controls access to visual and physical selections of each graphical layer of a design



Click on the color box to change a layer color



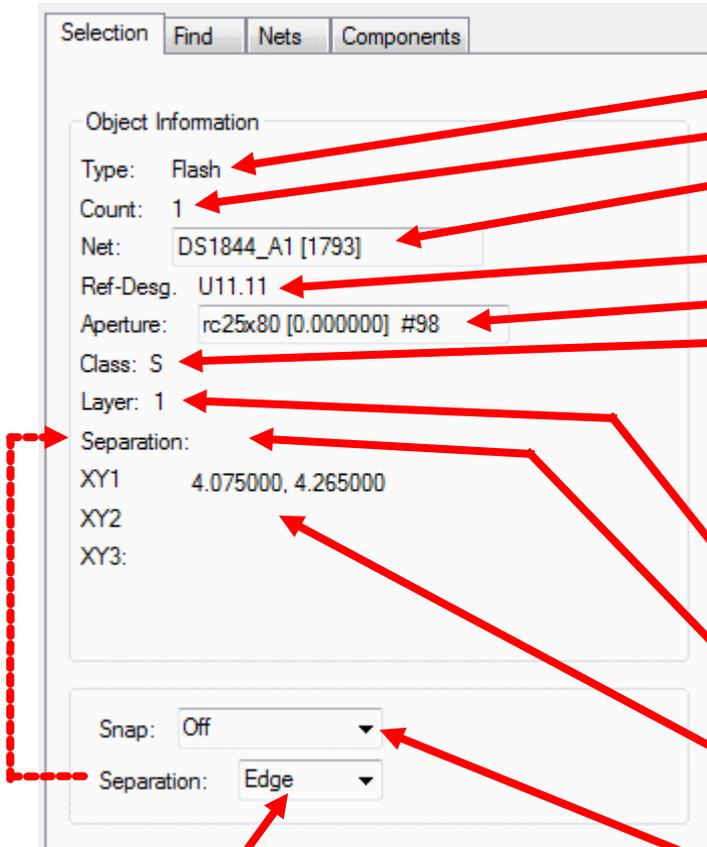
Select a new color and choose **OK** to update layer color (screen refresh may be required)

# Action Display Tabs

# Selection Tab controls the function and reports the results of a “select” action

See the Item Selection slides at the end of this guide for “How to Select” information....

Selected Item information:



Type of item selected - flashed pad, segment, polygon, arc

Quantity of items selected

Net name from CAD system

- number in parenthesis is Adiva net number

Reference Designator & Pin Number

Aperture size of object selected, its rotation and number

Class of a pad/hole item

- = pad/hole class not available

S = Surface Mount

P = pin-thru hole

V = via

T = tooling hole

t = test point

F = fiducial

C = cosmetic (no real function)

Layer item is located on

Separation spacing between any two items selected

XY coordinates of a selected item

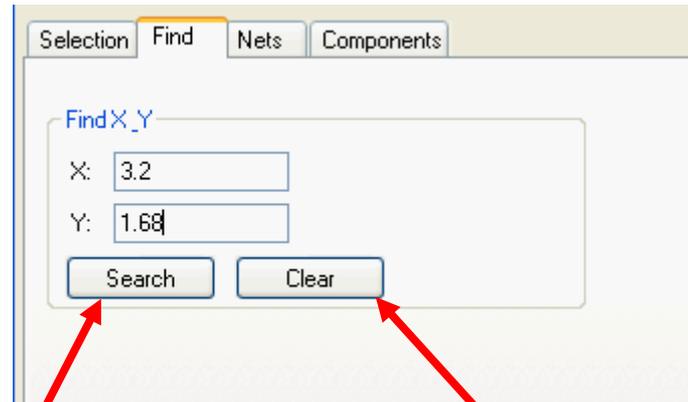
Snap option controls the select and measure routines...  
snap to pad, snap to line, snap to item, etc...

Separation option controls the report of any two items selected...

Edge - reports the spacing edge-to-edge between two selected items

Center - reports the spacing center-to-center between two selected items

## Find Tab provides search functions



Type in an XY location either in inches or mm, select Search and a crosshair will appear at the requested location of the design.

Selecting Clear removes the crosshair from display.

# Nets Tab Locates and Highlights Selected Nets in Graphics

Select a net in the Net Highlight box and the net is centered and Highlighted in white at current zoom level in the Graphics screen

Select another net and the first is un-highlighted and the next selection is highlighted

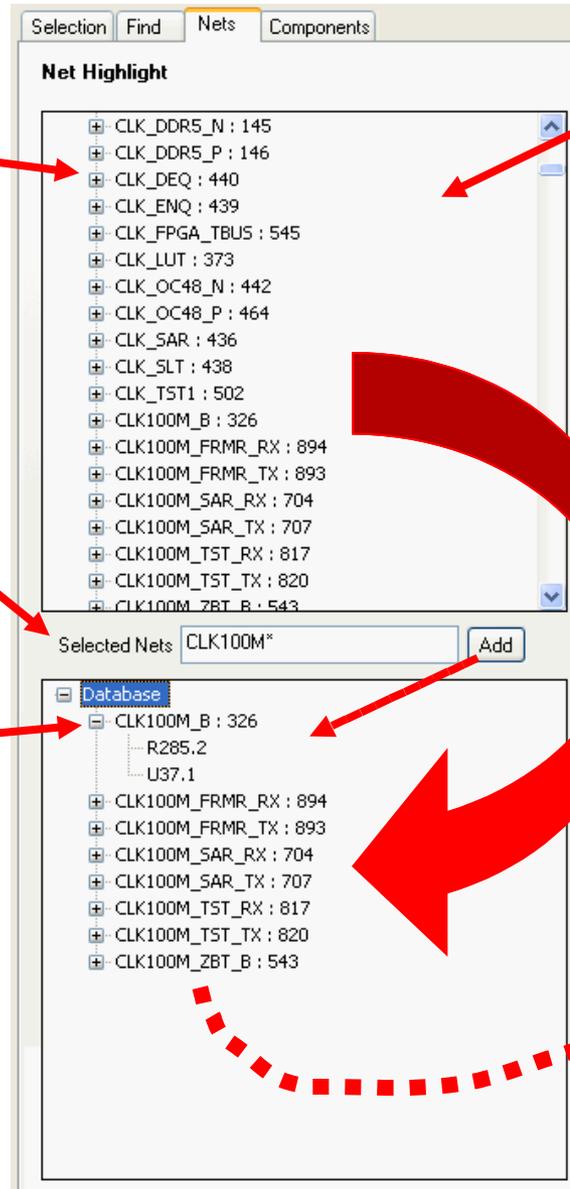
Enter a net name (wildcards work \*) and select "Add" and net name(s) drop into Selected Nets list

Nets in Selected Nets box are highlighted in layer color to view routing topology

Actual Net Length is also displayed (extra traces under pads are not part of length calculation – reports TRUE net length)

Click on Net Name and component outlines appear – click again and outlines disappear

Click on RefDes-pin# and a crosshair appears at component pin location – click again and the crosshair disappears



Design Net Names listed in Net Highlight box

Drag and Drop nets for detailed selection info

Drag a net name outside the box to remove a net from the Selected Nets list

- or -

Drag "Database" to remove all nets

# Components Tab Locates and Highlights Selected Components in Graphics

Select a component in the Component Highlight box and the component is centered and highlighted in white at current zoom level in the Graphics screen

Select another component and the first is un-highlighted and the next selection is highlighted

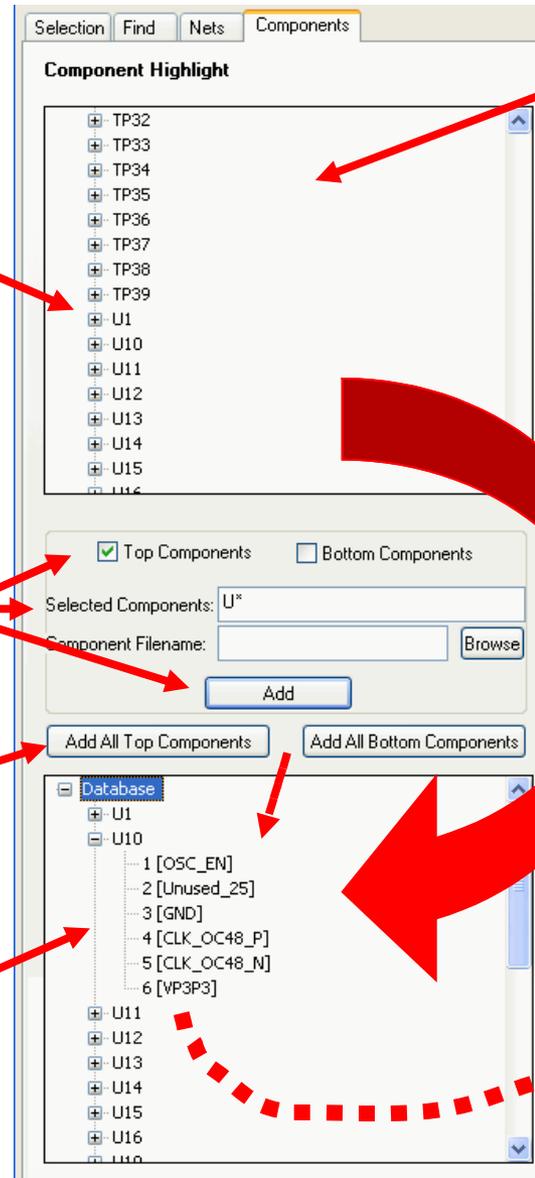
Enter a component name (wildcards work \*) and select "Add" and the component(s) drop into the Selected Components list

Text entry selection is filtered by Top or Bottom Components check boxes

Add All Top or Bottom Components acts as a wildcard selection of all Top or Bottom components to the Selected Components box

Components in Selected Components box are highlighted in white

Click on RefDes-pin# and a crosshair appears at component pin location – click again and the crosshair disappears



Design Components listed in Component Highlight box

Drag and Drop components for detailed selection info

Drag a component outside the box to remove it from the Selected Comps list

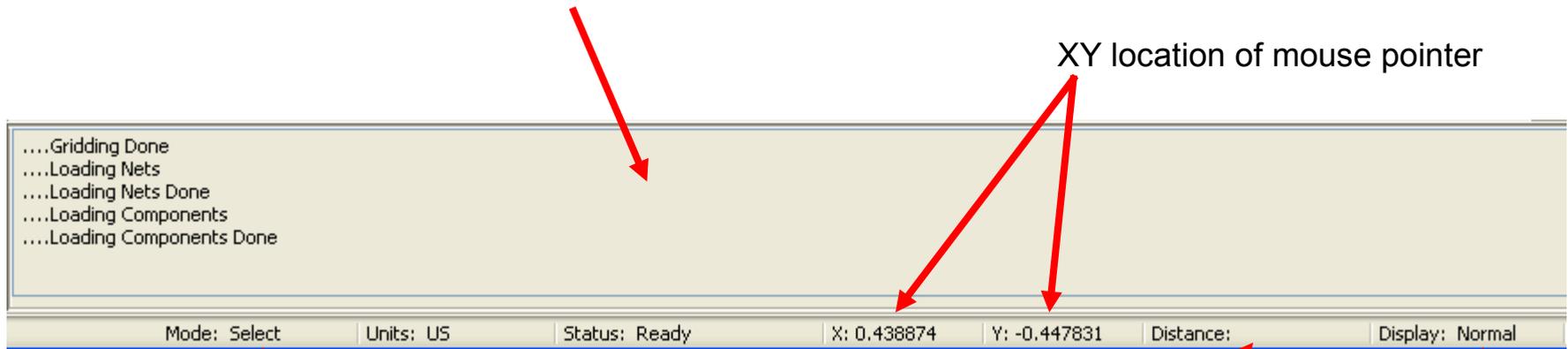
- or -

Drag "Database" to remove all components

# Message Display & Information Bar

# Message and Information Bar reports process status

Scrollable window reporting status of all processes including data load



XY location of mouse pointer

Mode displays the function mode of the mouse. Modes are set by View Menu or ToolBar selection and stay in effect until specifically changed

**Select** allows user to select items on the graphics screen

**Zoom** allows user to draw zoom boxes to zoom-in on specific areas

**Pan** allows user to pan across the design by dragging a "from-to" line

Distance reports the XY distance between two points as reported from the Measure Routine.

**Display: Normal** -or- **Display: Flipped**  
Reports the current viewing side of the graphics

**Normal** is the typical mode in an as-designed view – usually the Top side of the design

**Flipped** is looking from the opposite side – usually the Back side of the design

# Item Selection

# Item Selection

- An important function to understand is the “Select Item” function
- Items on a layer (or multiple layers) can be selected for detailed item information
- Net Tab and Component Tab automatically allow the selection of single Nets or Components.
- To select a specific item, be sure the Selection Tab is forward and you are in the “Select” mode by choosing the “Select Item” icon in Adiva’s toolbar...



# Item Selection

Once in “select” mode, be sure a layer(s) is ON

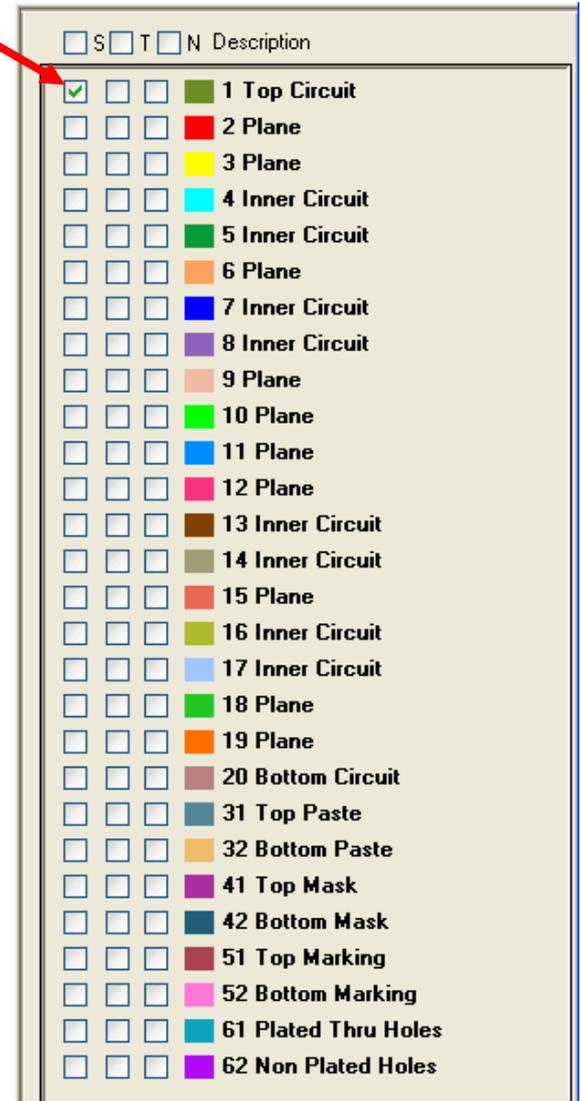
Then, with the left mouse button, click on any object on that particular layer. It will highlight in white. On the left side of the Adiva screen in the Selection Tab, attributes of the selected item will be reported.

To select more than one item, hold down the <shift>key while selecting. Items will be added to a “select” list – a collection of selected items.

Another way to select a group of items is to hold down the left mouse key and drag a box over a group of items to be selected. Everything inside or touching the drawn box will be highlighted in white meaning they are selected.

Another way to select a group of items is to hold down the right mouse key and drag a box (typically a small box) outside of a group of items. Everything outside the drawn box will be highlighted in white meaning they are selected.

Choose the “Select” button again in the toolbar, and everything selected will become un-selected (white highlight goes away).



**END**

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