



Altair

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**HyperWorks**

Altair HyperGraph 2D Tutorials

HG-1010: Changing Curve Display Attributes

## HG-1010: Changing Curve Display Attributes

In this tutorial you will learn how to:

- Use the **Headers/Footers** panel
- Change curve attributes
- Use the **Notes** panel
- Use the **Options** panel and style sheets

### Tools

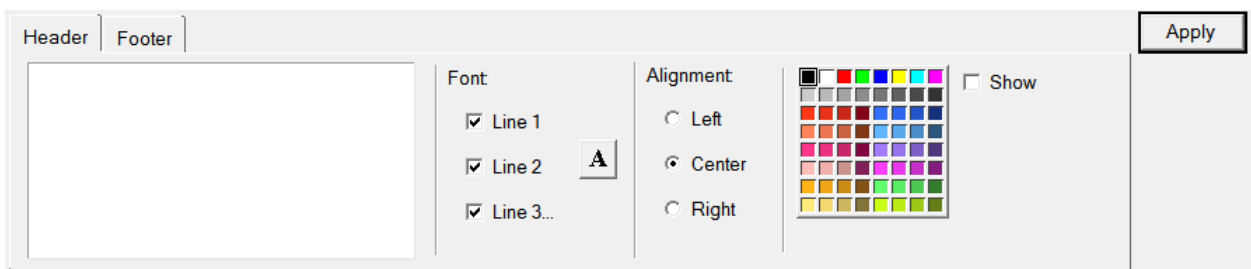
The **Headers/Footers** panel can be accessed in one of the following ways:

- Click the **Headers/Footers** panel icon  in the toolbar

Or

- From the menu bar select **Annotations > Headers/Footers**

The **Headers/Footers** panel allows you to add headers and footers to your plots, specify font style and color, position the titles, and turn them on and off.



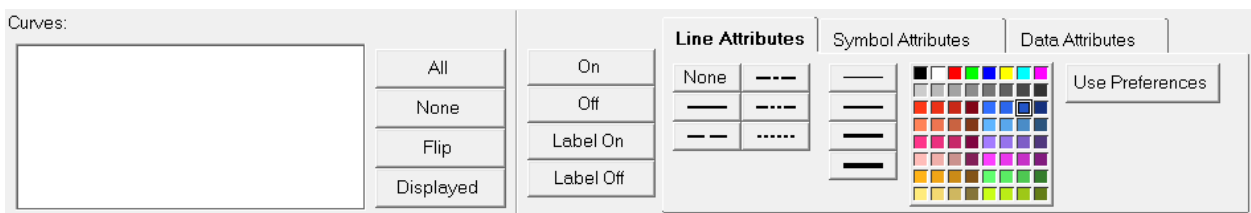
The **Curve Attributes** panel can be accessed in one of the following ways:

- Click the **Curve Attributes** panel icon, , from the toolbar

Or

- From the menu bar select **Curves > Curve Attributes**

This panel allows you to change curve attributes such as line style, color, and weight as well as symbol style and color.



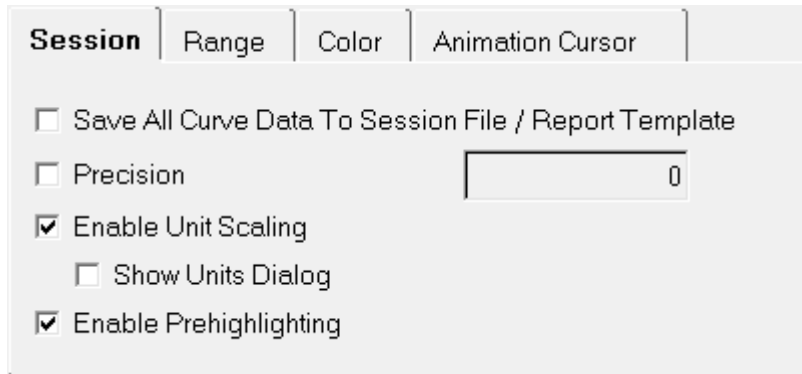
The **Options** panel can be accessed in one of the following ways:

- Click on the **Options** panel icon, 

Or

- From the menu bar select **Preferences > Options**

This panel allows you to change the color of a XY plot window's background, frame, grid lines, and zero line.



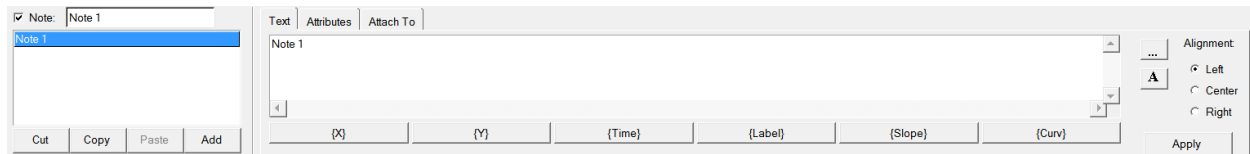
The **Notes** panel can be accessed one of the following ways:

- Click on the **Notes** panel button, 

Or

- From the menu bar select **Annotations > Notes**

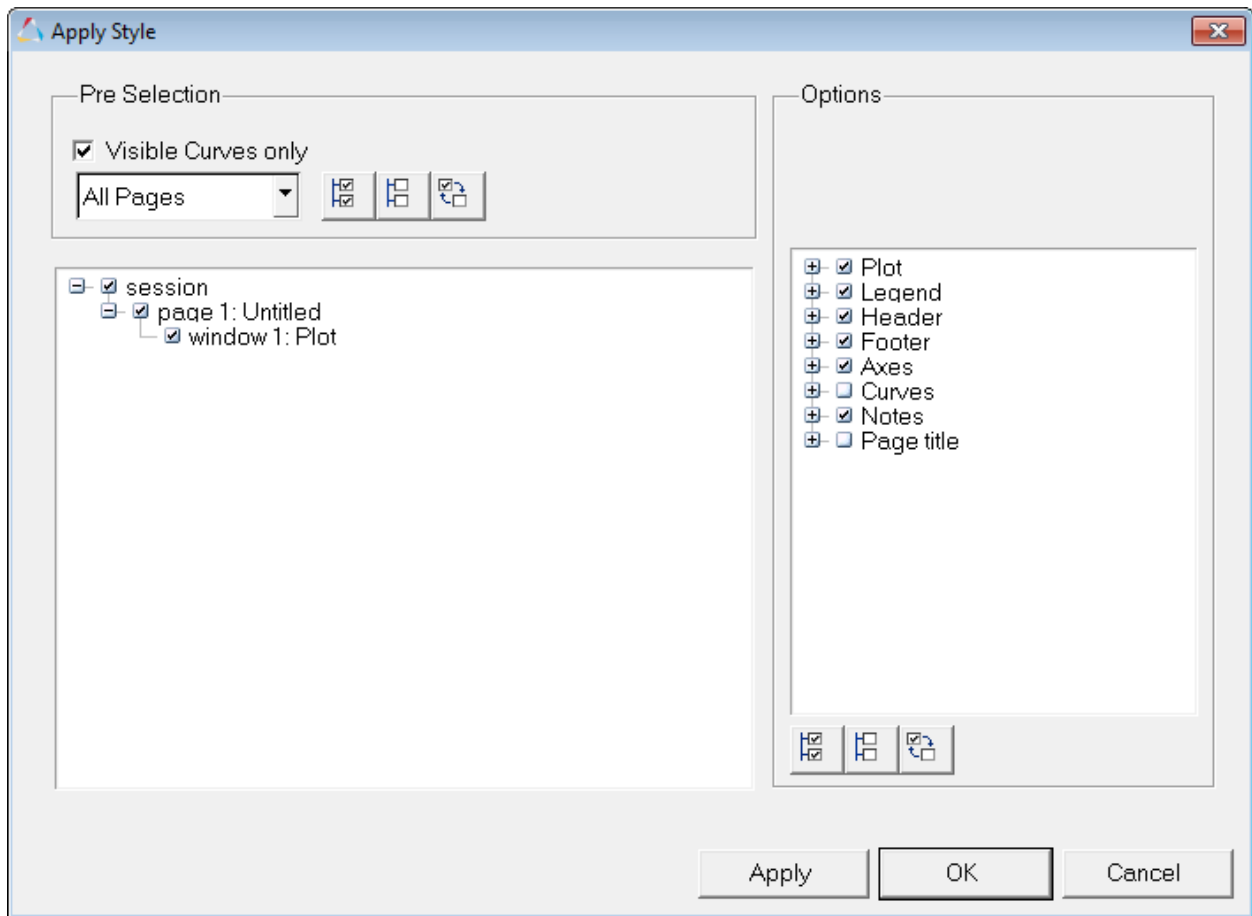
This panel allows you to annotate plots. Notes are text boxes placed in plot windows for labeling points, describing trends, and relating additional curve information. You can create logic and expression-based notes using Templex.



The **Apply Style** dialog can be accessed in the following ways:

- Right-click in the plot window and select **HG ApplyStyle...**

The **Apply Style** dialog allows you to quickly apply a plot window's attributes across all plot windows on the current page, or on all pages in the plot.





## Exercise: Editing Curve Display Attributes


### Step 1: Open Session File demo\_3.mvw.

1. From the **File** menu, click **Open > Session**.
2. From the plotting folder, select the demo\_3.mvw file and click **Open**.


### Step 2: Change the header for window 1 to REQ/3 force.

1. Verify that window 1 on Page 2 is active.
2. Click on the **Headers/Footers** panel icon, .
3. From the **Header** tab, replace the name **REQ/3 curve 3** with REQ/3 force and press ENTER to apply the change.
4. Change the header font size by clicking the font button, .
5. Change the color of the header from the color palette.

### Step 3: Change the line style for the curves in window 1.

1. Click the **Curve Attributes** icon .
2. From the **Curves** list, select **X**, **Y**, and **Z**.
3. From the **Line Attributes** tab, change the thickness of the curves.


### Step 4: Change the frame color for window 1 to yellow.

1. Click on the **Options** panel icon, .
2. From the **Color** tab, select the option **Frame**.
3. Select yellow from the color palette.

### Step 5: Apply the window and curve display attributes of window 1 to the other plot windows on page 2.

1. In window 1, right-click and select **HG ApplyStyle...** from the pop-up menu to open the **Apply Style** dialog.
2. Select **Current page**.
3. Activate only the attribute options **Plot**, **Header**, and **Curves**. Deactivate all other options.
4. Click **OK** to apply the active attributes to the other plot windows on page 2.

### Step 6: Create the note "Max force is {Y} at time {X}" and attach it to a curve in window 1, on page 2.

1. Activate window 1.
2. Enter the **Notes** panel, .
3. Click **Add** to create a new note named Note1.
4. From the **Text** tab, replace **Note1** with Max force is.
5. Under the **Text** window box, click **{Y}** to add the Templex string {y} to the note.
6. Append to the note at time and click **{X}**.


The complete note is "Max force is {y} at time {x}".

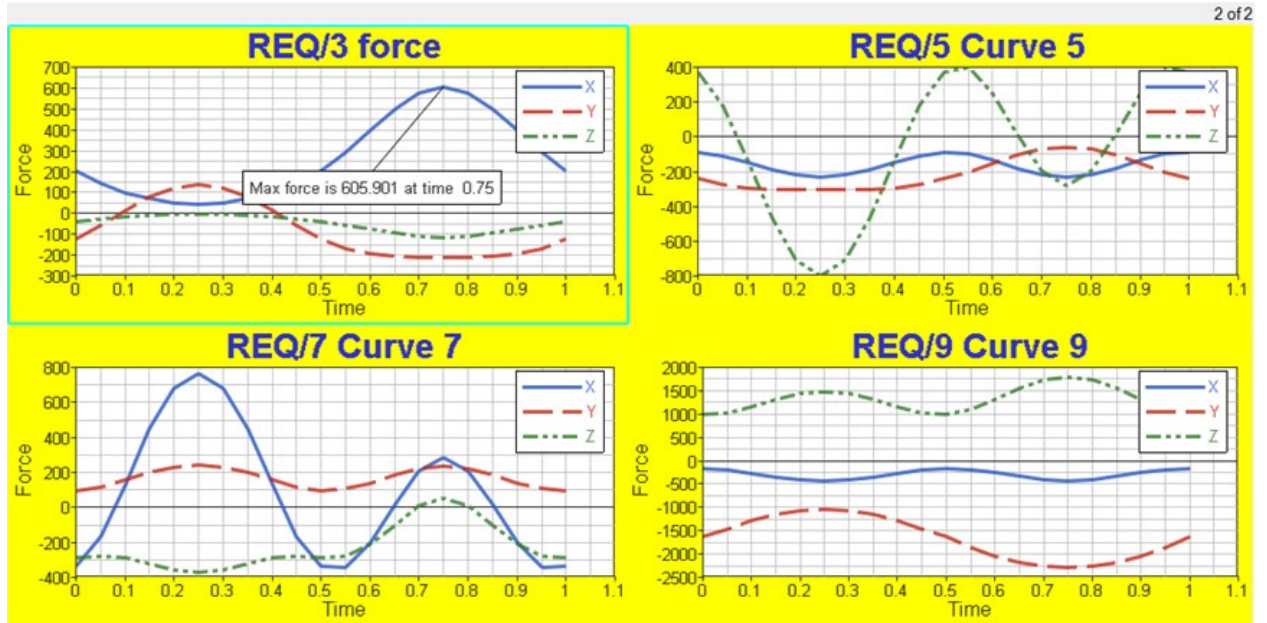
7. Click **Apply** to update the note.
8. From the **Attach to** tab, select the option **Curve** to add the note to a curve.

**Note:** The note automatically attaches to a data point on curve 1 (the X curve). In the **Notes** panel, the **Curve** and **Point** to which the note is attached is called out. The note's **{X}** and **{Y}** Templex statements are updated to reflect the data point's **X** and **Y** values.

9. Click points on any of the curves in window 1 to update the location/curve to which the note is attached.

**Note:** The **{X}** and **{Y}** values are updated automatically.

- Under **Find point**, click the **Maximum** button, , to attach the note to the curve's maximum **Y** value.



- With **Note1** highlighted in the **Notes** list, turn off this note by deactivating the **Note** box.

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**Step 7: Create and attach a second note with Templex to a curve.**

While in the **Notes** panel, do the following:

1. Activate window 3.
2. **Add** a note.
3. On the **Text** tab, replace **Note2** with "curve Y absolute area is {absarea (p2w3c2.x,p2w3c2.Y) }".  
The text in curly braces is a Templex statement.
4. Click **Apply** to update the note.
5. On the **Attach to** tab, select the option **Curve**.
6. Click the **Next Curve** button until the note is attached to curve 2 (curve **Y**).