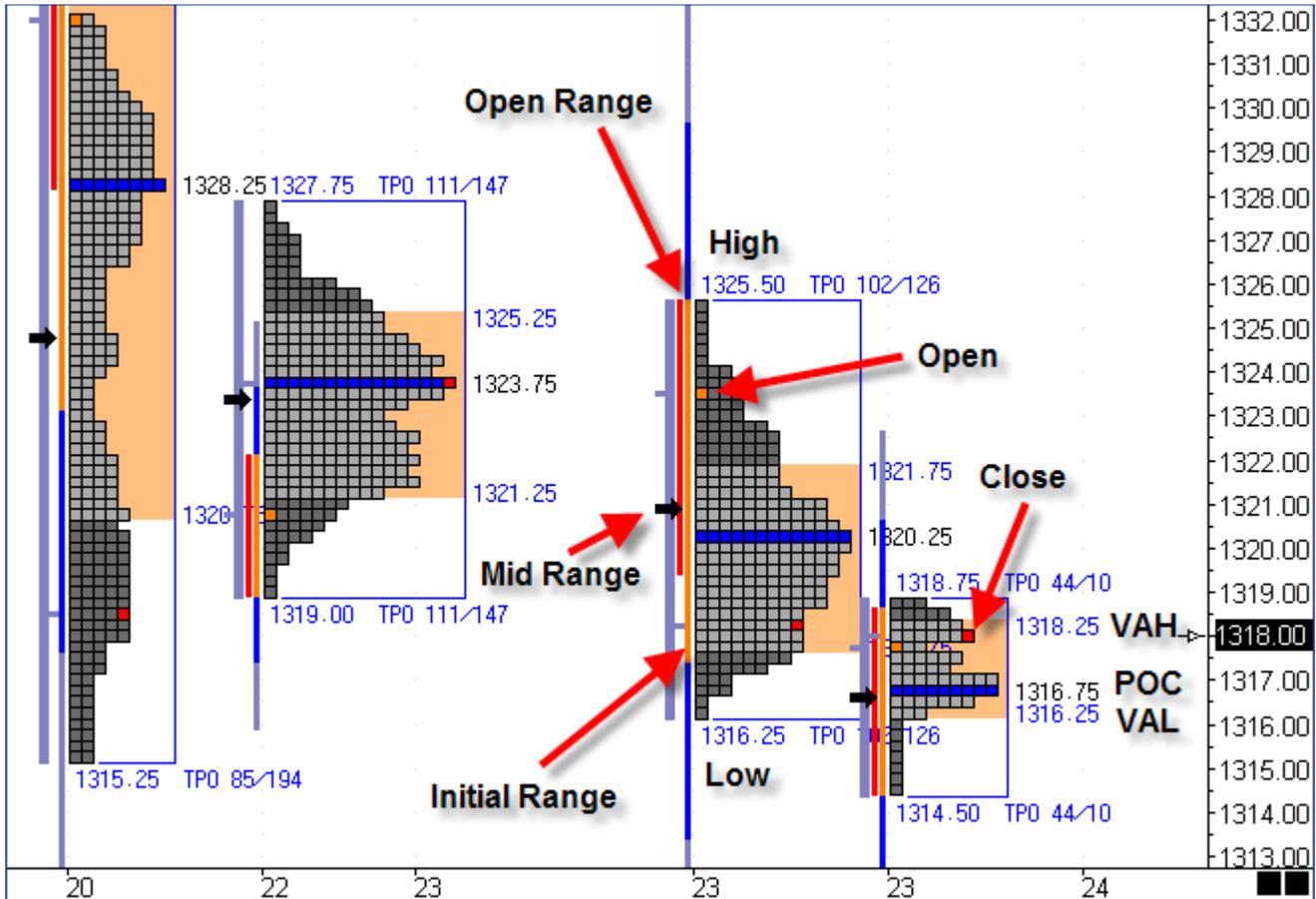


Price Histogram

The Price Histogram study draws horizontal rows of boxes, markers or letters. The rows are drawn at different lengths and price levels. The length of a row represents the number of times that the market has traded at the given price level. Longer rows indicate that the market has traded many times at the given price level. Shorter rows indicate that the market has not traded many times at the given price level.



A Control Point (POC) row will mark the longest Histogram row. Two Range Band lines will mark a specified Range of Histogram bars that extend upward or downward from the Control Point. The Price Histogram rows will be colored based on the Range% parameter. Rows that are within the Range will be colored with the 'Inner Range' color. Rows that are outside the Range will be colored with the 'Outer Range' color. Example, a Range% entry of 70 will cause the nearest 70% of the Histogram rows (to the Control Point) to be colored with the 'Inner Range' color. The other 30% will be colored with the 'Outer Range' color.

Value areas on the chart are represented by the group of long Price Histogram rows (near the Control Point). These value areas show you where the market is in balance (with equal buyers and sellers). The market price will often return to value areas. Sections of short rows display where the market has broken out of a value area and is moving towards a new value area.

Properties

Range% - Enter a percent number (like 70). The Inner Range rows will be contained within this Range of the Price Histogram. The Outer Range rows will be outside of this range. The Range Band lines will mark the specified Range% price levels with VAH for Value Area High and VAL for Value Area Low.

Minutes - If the 'Study Mode' is set to 'Minutes', then the Price Histogram will restart after the specified number of minutes. Example: 120 will start the Histogram over every 2 hours.

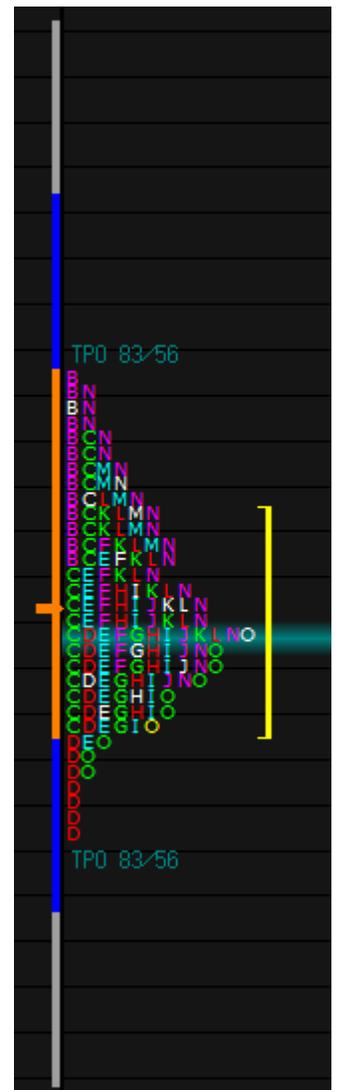
Restart - Enter an optional Restart time. If the 'Study Mode' is set to 'Restart Time' then the Histogram will restart at the specified Restart time. Example: 1000 will restart at 10:00 AM.

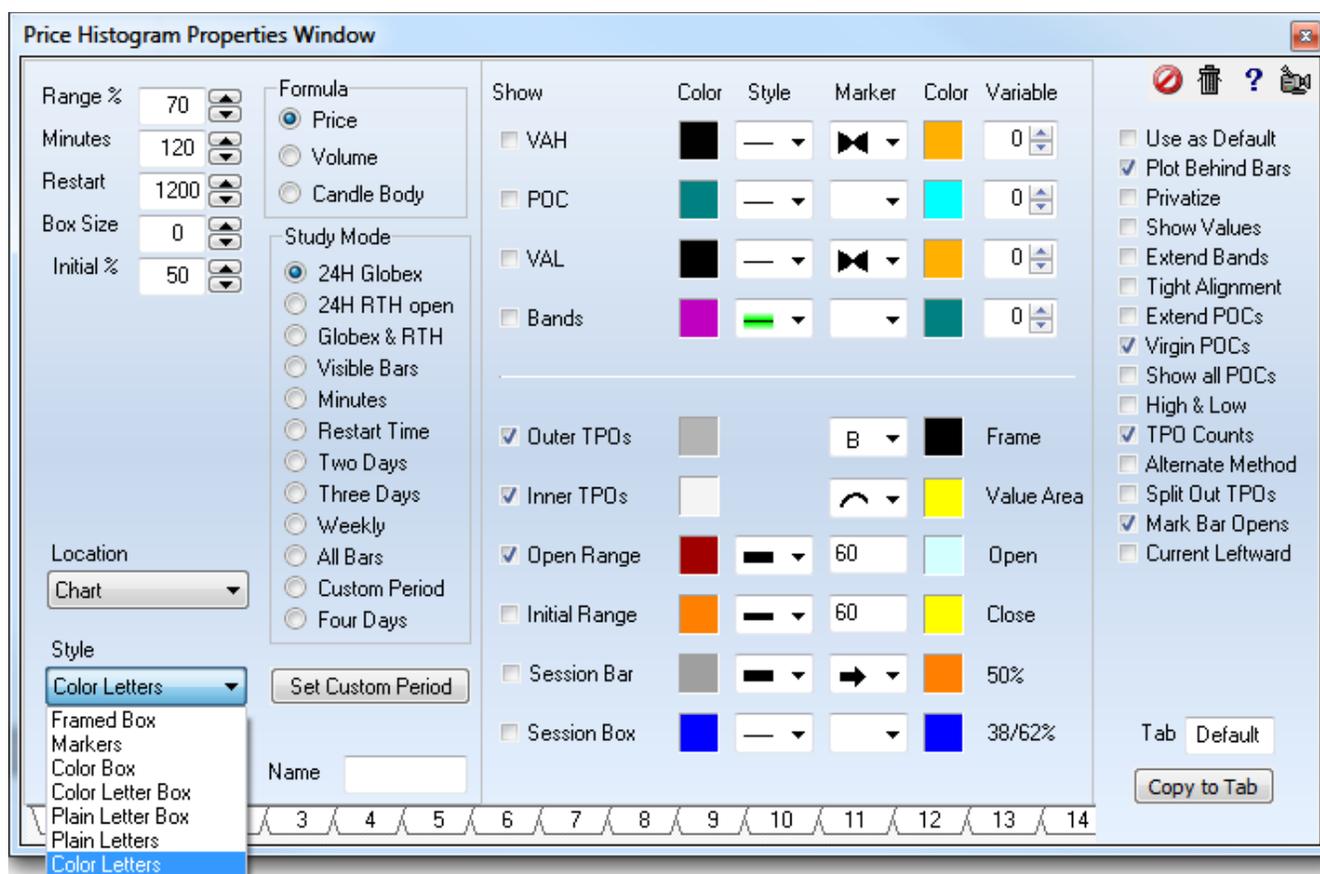
Box Size - Enter 0 to have the program automatically determine a box size. A specific box size in points appropriate for the symbol can be entered such as 0.25 for the ES #F symbol.

Initial % - Enter the percent of the Initial Range to be shown as extensions when the Initial Range box is checked. The Initial Range is the highest high and lowest low of the period following the start of the histogram. The period is defined by the number of minutes entered on the Initial Range line.

In this example on a 30-minute chart, the Initial Range period is 60 minutes. Therefore the Initial Range shown in Orange is covering the letters B and C. The extensions shown in blue and silver are each 50% of the length of the orange Initial Range line because the Initial % property is 50.

Price Histogram Propert	
Range %	70
Minutes	120
Restart	1200
Box Size	0.25
Initial %	50





Formula

Price -The full High Low range of a chart bar will be used in determining the Price Histogram rows

Volume - The length of the Histogram rows will be determined by the Volume of the Price bars. This allows you to view the Histogram rows with an emphasis on the volume of the bars, rather than on price only.

Candle Body - Only the Candle Body price range (between the Open and Close prices) will be used in determining the Price Histogram rows.

Study Mode

This property selects when the Histogram starts.

24H Globex – The Histogram is 24 hours in duration and starts with the Globex open time.

24H RTH Open – The 24 hour histogram starts with the Real Time Hours (day session) open.

Globex & RTH – A new histogram is started at each session open. Thus 2 per day.

Visible Bars – All bars visible on the chart are assembled into one histogram.

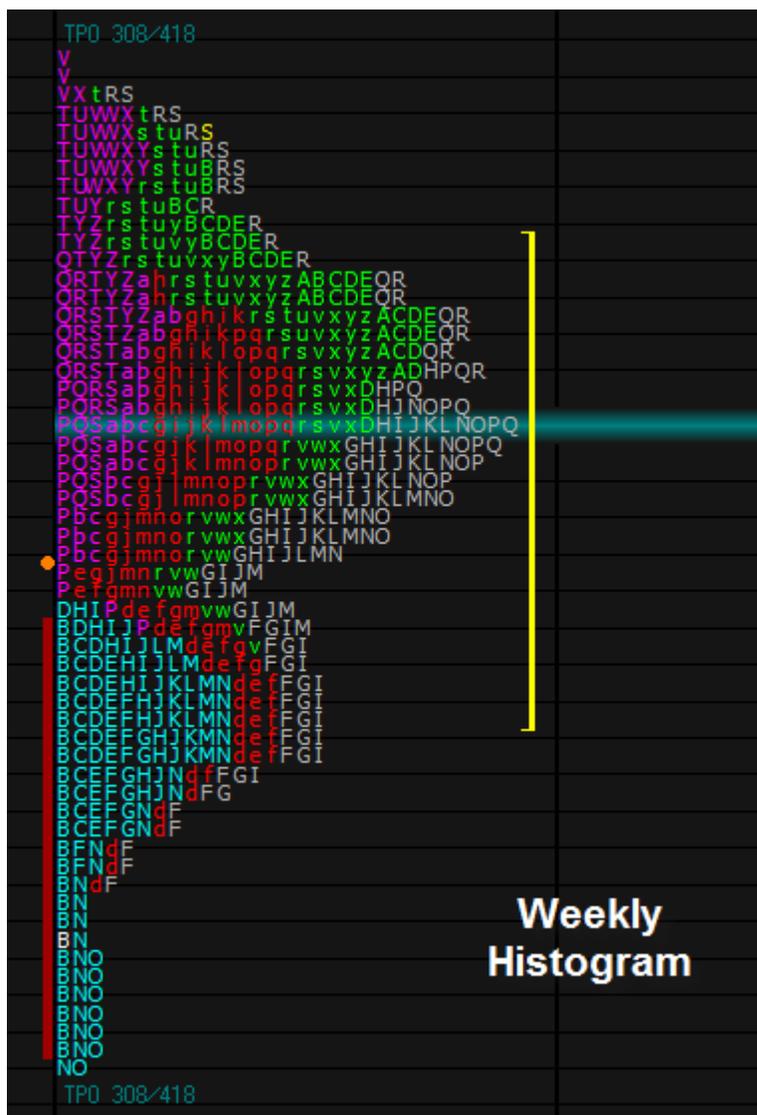
Minutes - The Histogram will restart after the specified number of minutes.

Restart Time – The Histogram will start at the Globex open and restart at the specified Restart time.

Two Days – There will be a daily histogram from the Globex open but each histogram spans 2 trading days, ie. 48 hours.

Three Days – There will be a daily histogram from the Globex open but each histogram spans 3 trading days, ie. 72 hours.

Weekly – A Histogram is made for a week, from the Sunday Globex open through the Friday afternoon close. Tip: Use the 'Day of Week' Color Bar study to color each day independently in the Histogram.



All Bars – One Histogram is created using all bars in the chart's data file.

Custom Period – One Histogram is created using the bars in the time period manually selected by you. Click the Set Custom Period button to change the cursor to a pencil and then drag from left to right across the chart bars to be included in the Histogram.

Note: A histogram is built from a collection of bars. Thus, the boundary for the collection will always be larger than the chart's time frame. A Daily bar chart will use a month for its boundary. A Weekly bar chart and a Monthly bar chart will use an annual boundary of January 1st.

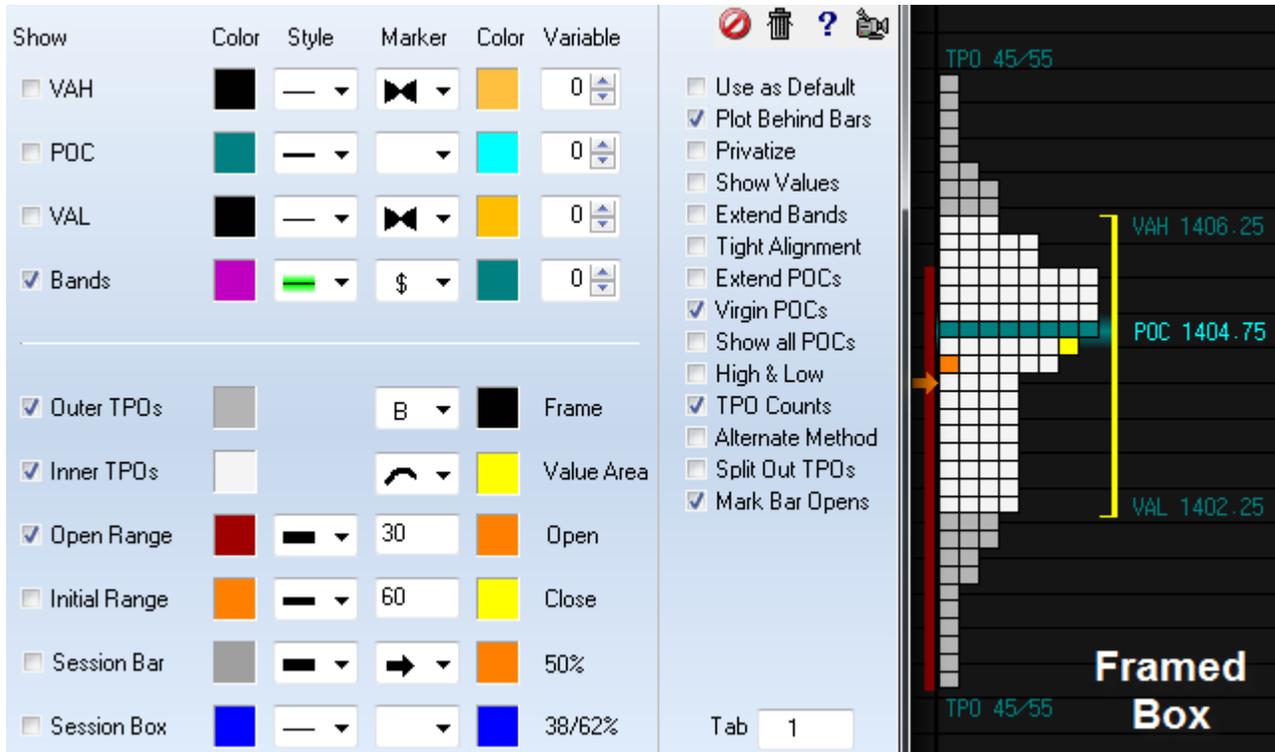
Style

The properties provide for a large number of variations in the Price Histogram. Use the Style selection box to pick one of 7 primary styles.

NOTE: The first 3 styles are available to non-subscribers. Ensign subscribers must contact Ensign Software, Inc., and request the additional Letter styles be enabled. Send an email to billing@ensignsoftware.net



Framed Box – Each TPO is represented by a square box.



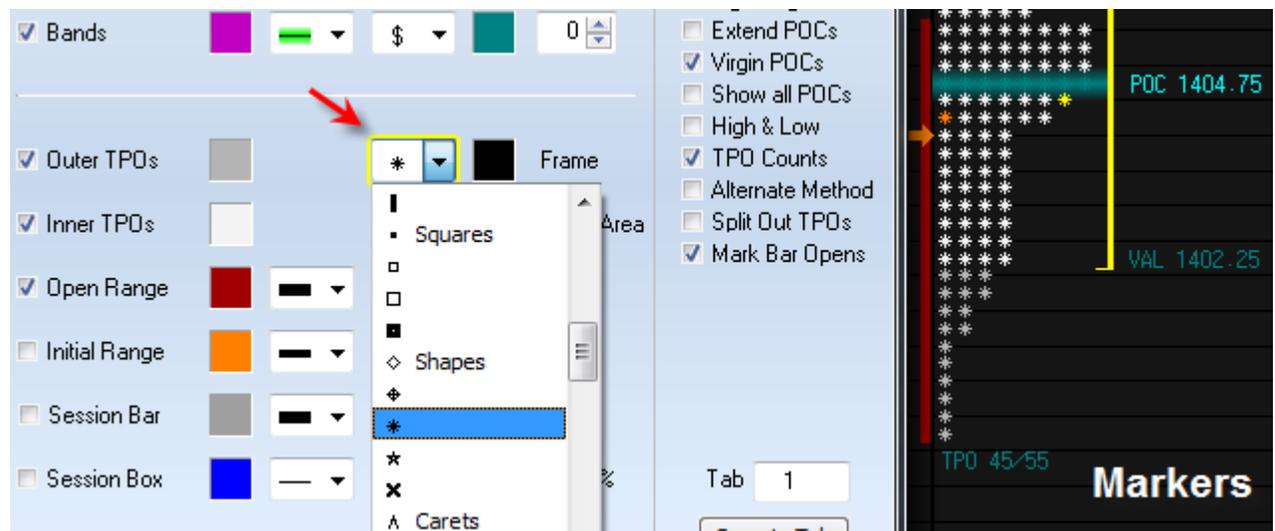
Show	Color	Style	Marker	Color	Variable
<input type="checkbox"/> VAH	Black	—	◀▶	Orange	0
<input type="checkbox"/> POC	Teal	—	□	Cyan	0
<input type="checkbox"/> VAL	Black	—	◀▶	Orange	0
<input checked="" type="checkbox"/> Bands	Magenta	—	\$	Teal	0
<hr/>					
<input checked="" type="checkbox"/> Outer TPOs	Grey		B	Black	Frame
<input checked="" type="checkbox"/> Inner TPOs	White		◡	Yellow	Value Area
<input checked="" type="checkbox"/> Open Range	Red	—	30	Orange	Open
<input type="checkbox"/> Initial Range	Orange	—	60	Yellow	Close
<input type="checkbox"/> Session Bar	Grey	—	→	Orange	50%
<input type="checkbox"/> Session Box	Blue	—		Blue	38/62%

Use as Default
 Plot Behind Bars
 Privatize
 Show Values
 Extend Bands
 Tight Alignment
 Extend POCs
 Virgin POCs
 Show all POCs
 High & Low
 TPO Counts
 Alternate Method
 Split Out TPOs
 Mark Bar Opens

Tab 1

TPO 45/55
VAH 1406.25
POC 1404.75
VAL 1402.25
TPO 45/55
Framed Box

Markers - The boxes are replaced with the selected Marker. Several choices are available.



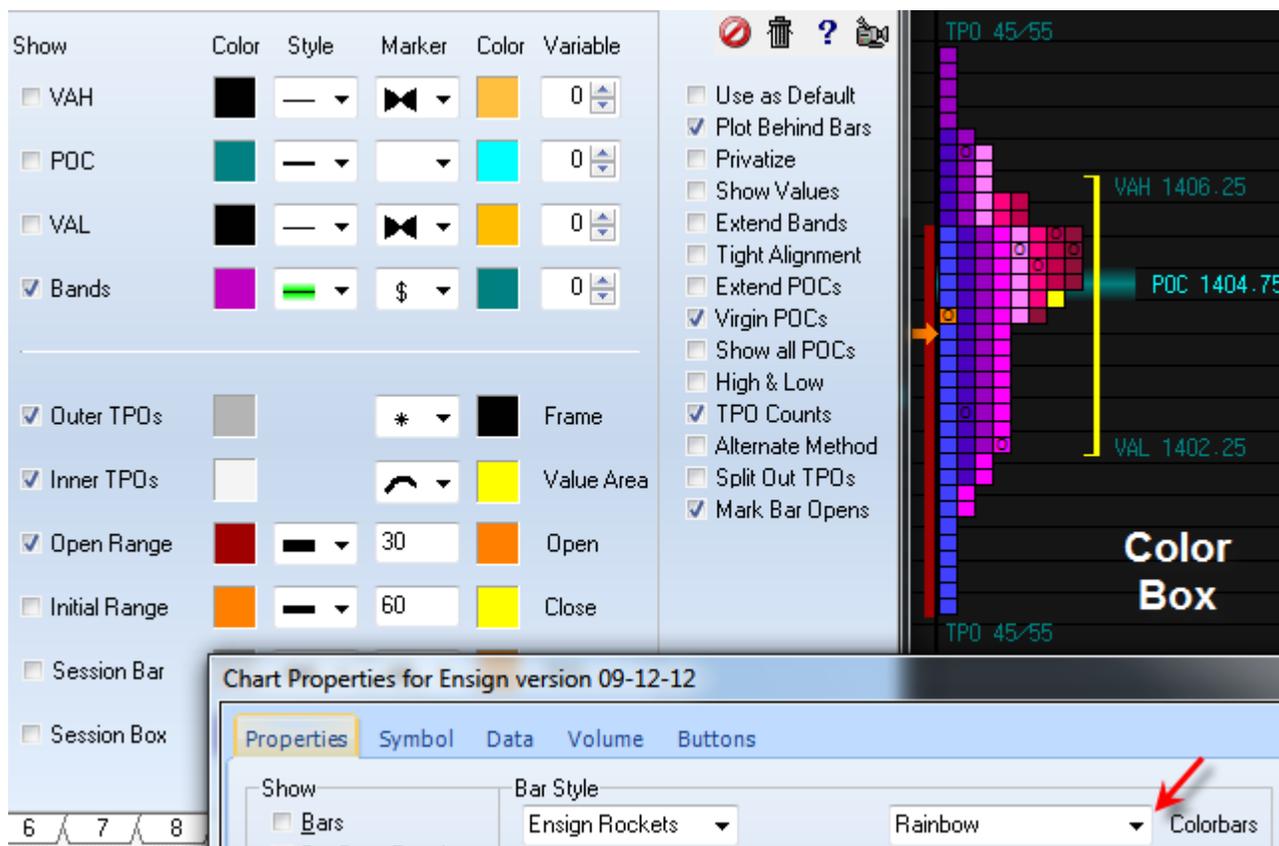
<input checked="" type="checkbox"/> Bands	Magenta	—	\$	Teal	0
<hr/>					
<input checked="" type="checkbox"/> Outer TPOs	Grey		*	Black	Frame
<input checked="" type="checkbox"/> Inner TPOs	White				Area
<input checked="" type="checkbox"/> Open Range	Red	—			
<input type="checkbox"/> Initial Range	Orange	—			
<input type="checkbox"/> Session Bar	Grey	—			
<input type="checkbox"/> Session Box	Blue	—			

Extend POCs
 Virgin POCs
 Show all POCs
 High & Low
 TPO Counts
 Alternate Method
 Split Out TPOs
 Mark Bar Opens

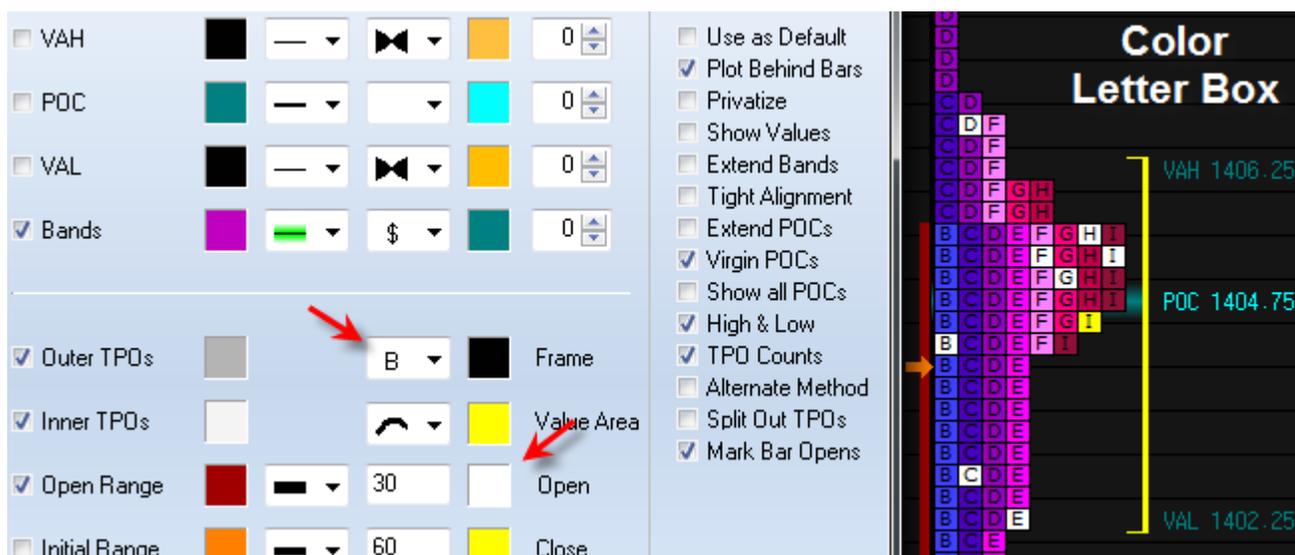
Tab 1

POC 1404.75
VAL 1402.25
TPO 45/55
Markers

Color Box – Each price bar in the Histogram is represented by a different color. Note: The color scheme used is the chart's Color Bar selection. The example shows the Rainbow selection which is a color progression through 26 colors. The Open for each bar is indicated by the 'O' in the box when the 'Mark Bar Opens' box is checked.



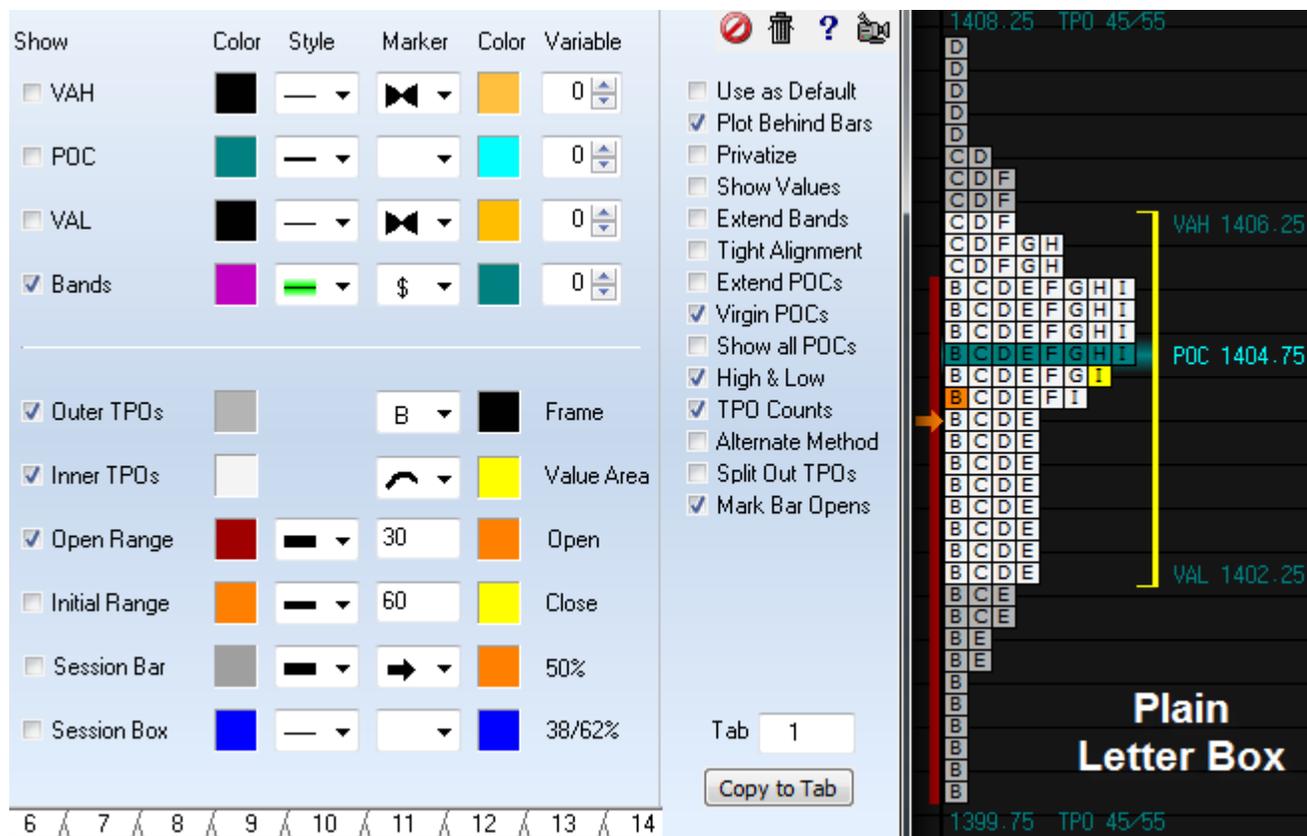
Color Letter Box – This style is similar to the last example, but each bar in the Histogram is also represented by a letter. *Ensign subscribers must contact Ensign Software, Inc., and request this style (and others) be enabled. Send an email to billing@ensignsoftware.net.*



The Marker on the 'Outer TPOs' row controls which letter is used for the 1st bar in the Histogram. The example shows the 1st period being marked by the letter 'B'. The next bar or period uses the next letter in sequence, which in the example is the letter 'C', etc.

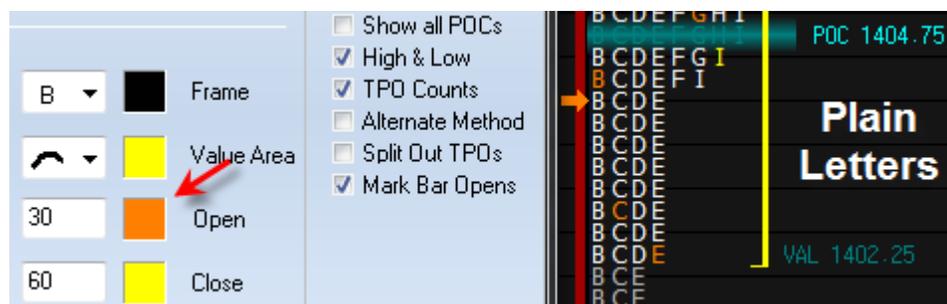
The example has the 'Mark Bar Opens' option checked, and so each period open is marked with a color change. The color used is the color selection adjacent to the 'Open' label, which is white in the example.

Plain Letter Box – This style is similar to the Color Letter Box, except the Color Bar coloring of the boxes is removed. The Outer TPOs are colored separately from the Inner TPOs. The box colors come from the color selections on the 'Outer TPOs' and 'Inner TPOs' rows.

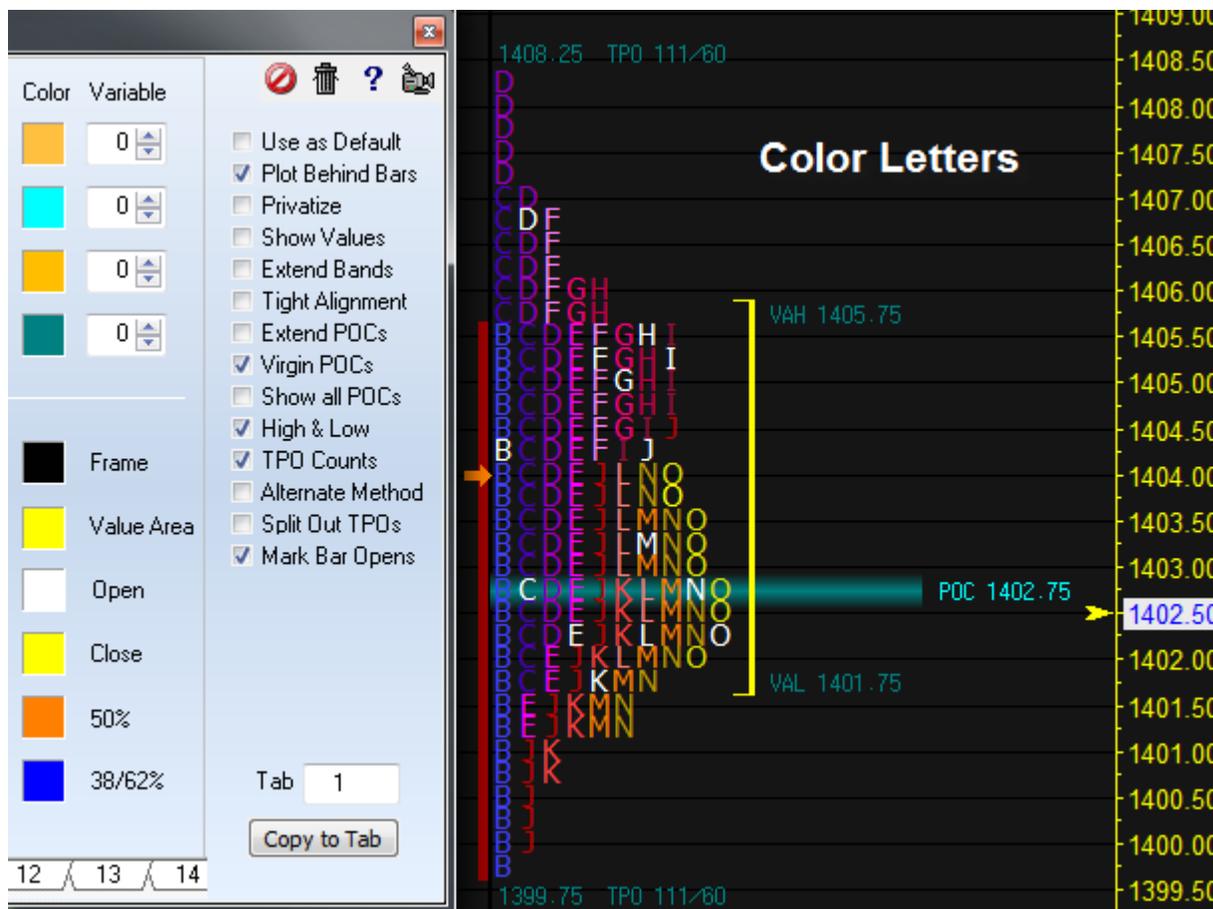


The Open for the session is colored in the Open color (orange in the example). The current price or Close of the session is colored with the Close color (yellow in the example).

Plain Letters – This style removes the box frames. The Opens are optionally colored as in this example.

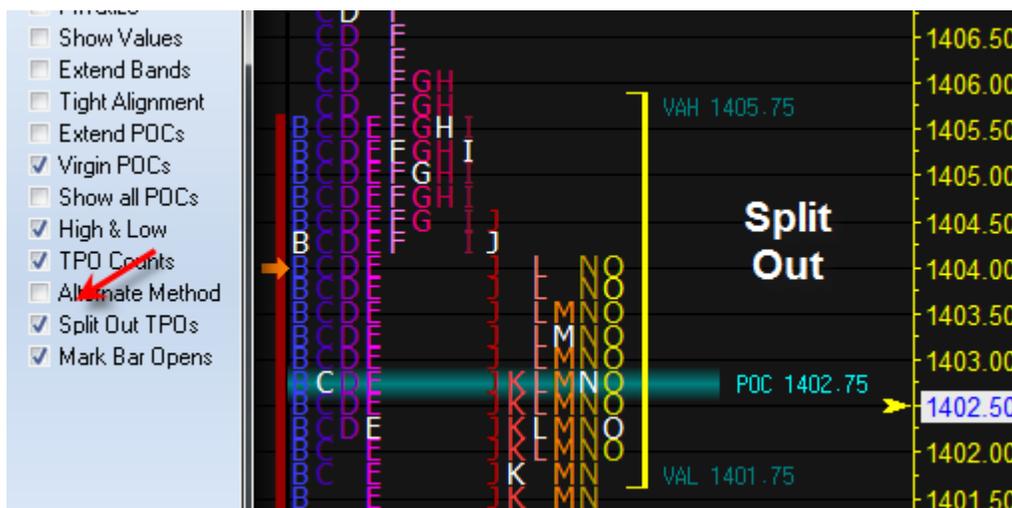


Color Letters – This style shows colored letters. The Opens are optionally colored.



Split Out TPOs

This check box option changes the display from the stacked pyramid to individual columns of boxes, markers, or letters, similar to bars.

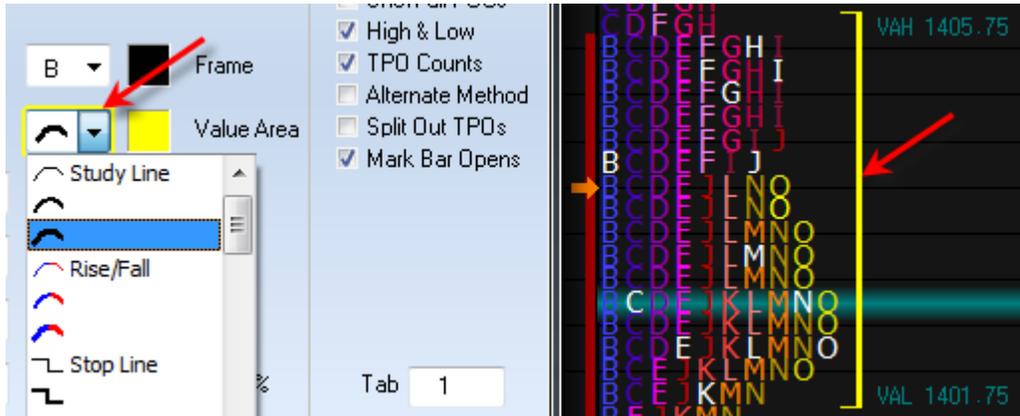


This property can have a keyboard key assigned to toggle its state. Make the key assignment on the Setup | Charts | Studies form.

+	PH Split Out Toggle
-	PH Tight Alignment

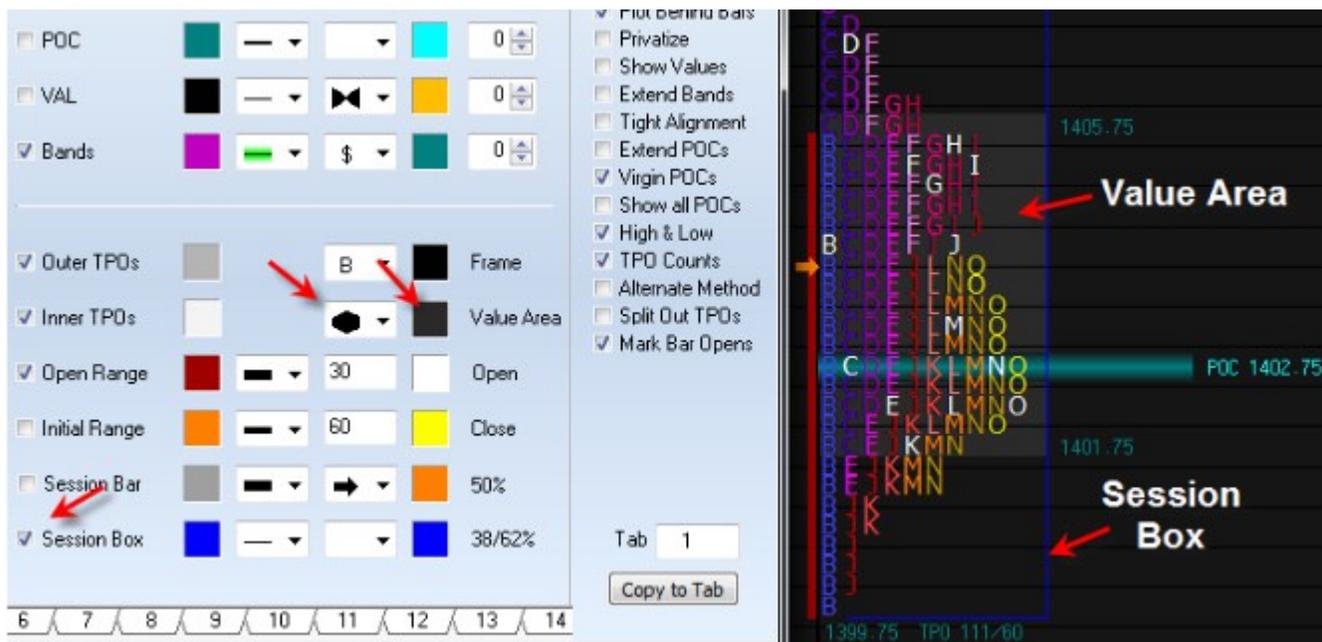
Value Area

The Value Area in the examples has been represented by a yellow bracket. The Marker on the Value Area row selects the width of the vertical line. The examples have used 3 pixels.



The 3 Study Line selections and the 3 Rise/Fall selections choose pixel widths 1, 2 and 3. The 2 Stop Line selections choose pixel widths of 4 and 5. The bracket color is the color selection adjacent to the Value Area label, which is yellow in the example.

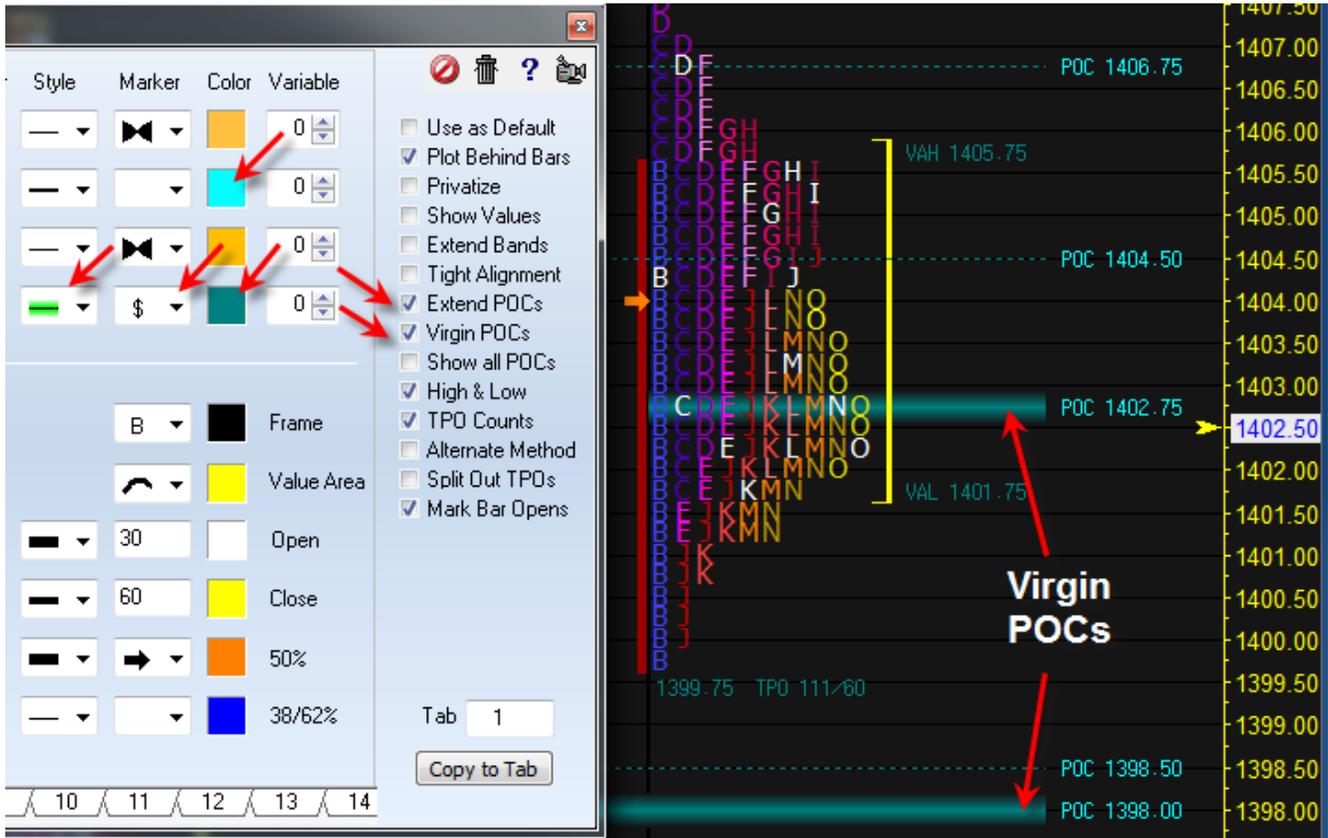
The Value Area can be changed to an area fill by changing the Marker to one of the Fill markers, as in this example. The fill color is the Value Area color selection, which has been changed to a shade of dark gray in this example.



The Session Box option has also been checked to illustrate this variation.

Point of Control

Several properties affect the display of the POC information.



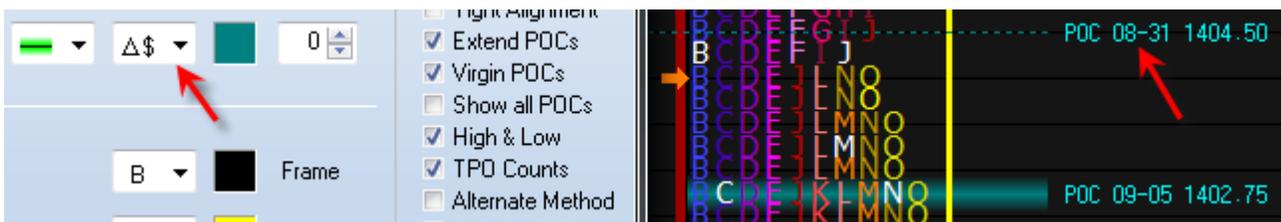
Extend POCs – This option extends POCs from other histograms to the right side margin.

Virgin POCs – This option shows the Virgin POCs in the selected Line Style, which in the example is the fat Fuzzy line style. The POC line color is the selection on the POC row to the left of the line Style. The non-virgin lines are drawn with a dotted line style.

Show All POCs – This option shows POCs for all Histograms from the chart's data set. Some of these would be from very old data and their display may clutter the screen.

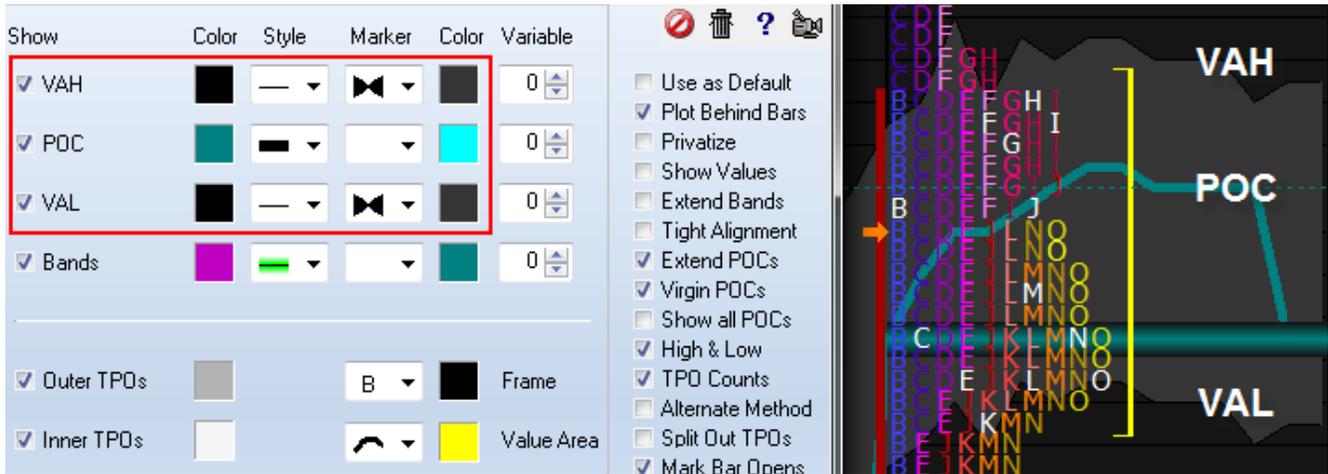
Price – The Marker on the Bands row is the '\$' selection to show prices for the POCs and the value areas. The color for the POC prices comes from the Color selection on the POC row, which in the example is Cyan. The color for the VAH and VAL prices comes from the Color selection on the Bands row, which in the example is Teal.

The Marker selection of the 'Delta \$' will add the date of the Histogram to the price.



Plot VAH, POC and VAL

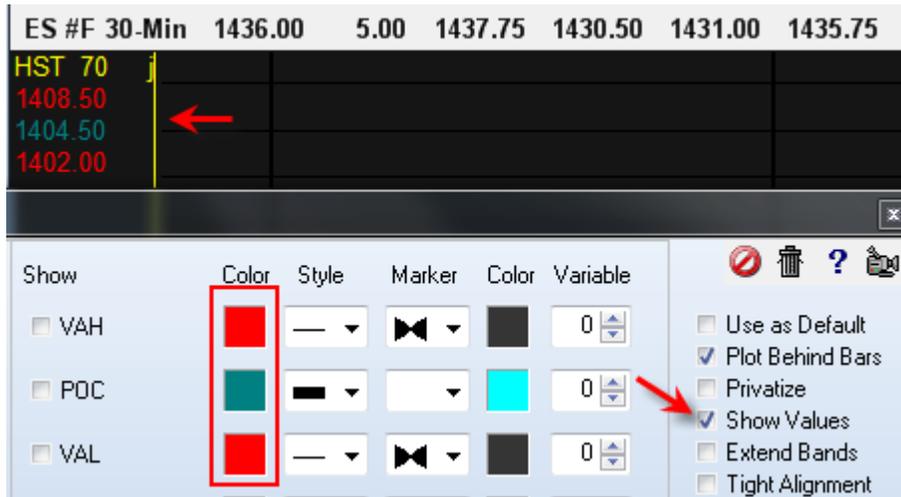
Check the Show boxes on the VAH, POC, and VAL lines to show a plot of these values as they evolved through the session.



In this example the VAH and VAL are plotted in a lighter shade of gray using the Fill Markers. The POC is plotted in the thick 5 pixel Teal colored line, and by the last period has moved to the current POC location shown with the fat fuzzy line. The POC moved higher for half of the day before falling to its current location.

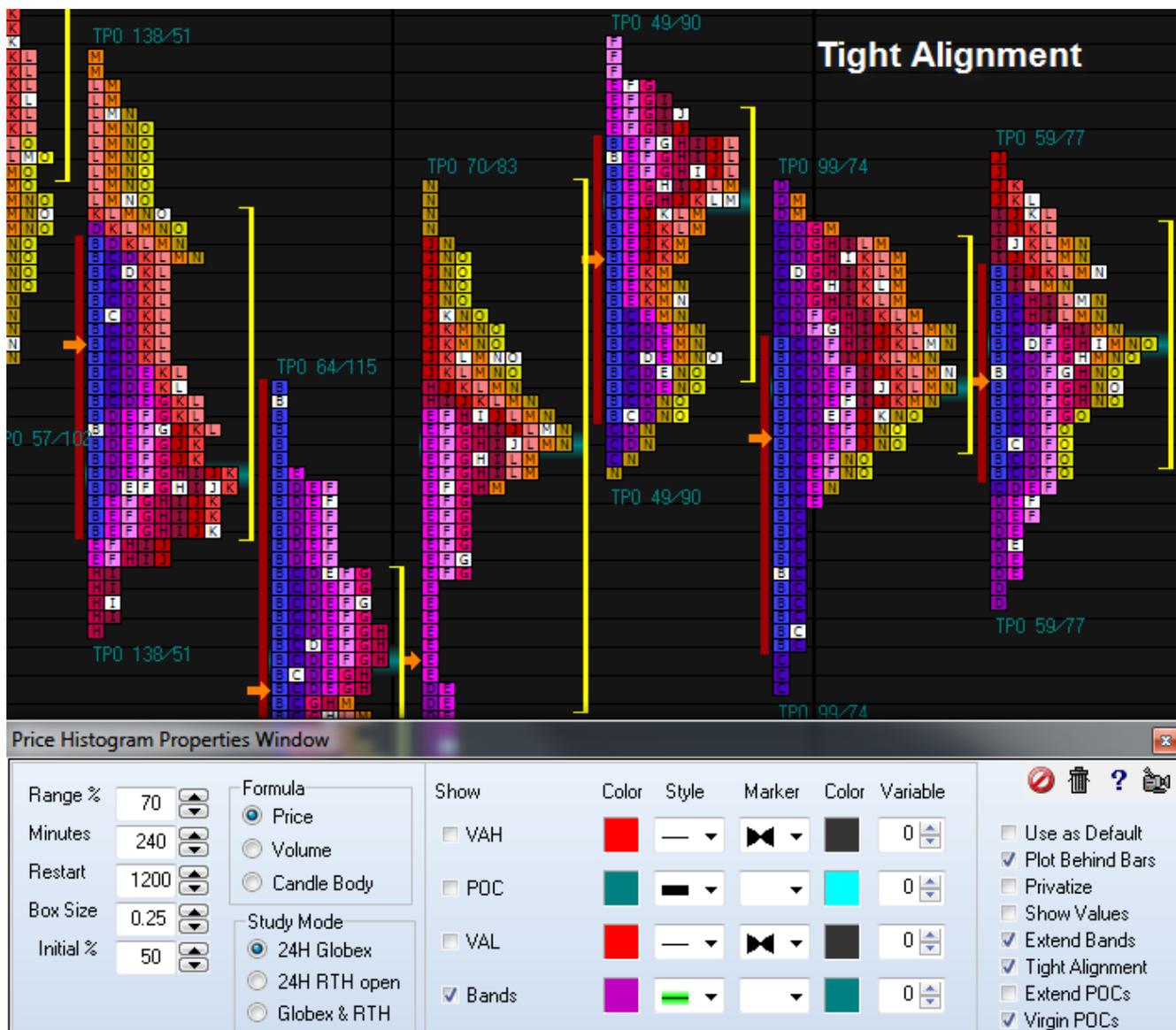
Other Options

Show Values – This option displays the VAH, POC, and VAL in the Study Data column on the left side of the chart.



Extend Bands – This option will extend the VAH and VAL lines from one Histogram through the following Histogram.

Tight Alignment – This option will change the spacing of the Histograms to shift rightward and leave their association with the horizontal time grid. The spacing will be based on the length of the POC line. This permits more Histograms to be shown in the view.



High & Low – Check this box to show the range High and range Low with the Histogram.

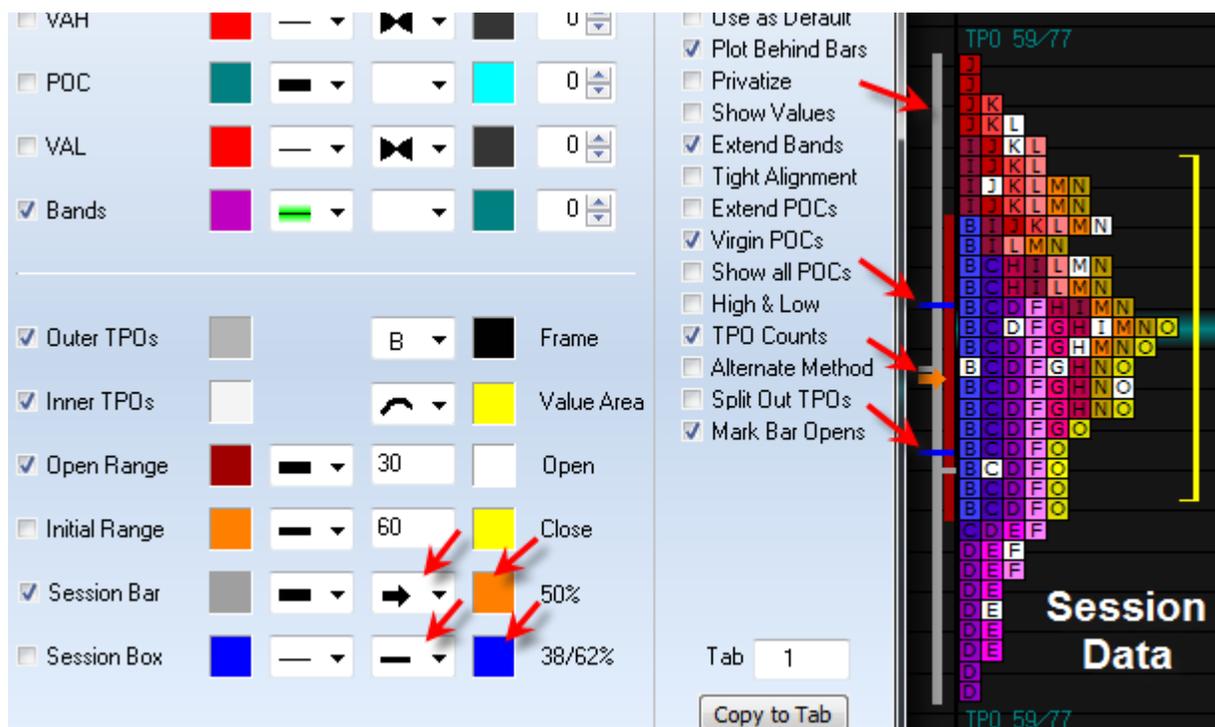
TPO Counts – Check this box to show the TPO count above the POC and the count below the POC. Most of the examples have had this information displayed.

Alternate Method – The standard method for determining the Value Area is the CGQ method. Check the box to change to an alternate method promoted by eSignal.

Open Range – Check this box to show a vertical line for the range of the opening period. The duration of the period is the number of minutes on 'Open Range' row. Most of the examples have shown this line in red for a 30-minute period. 60-minutes is another popular choice for the opening range period. The line width is controlled by the line Style selection.



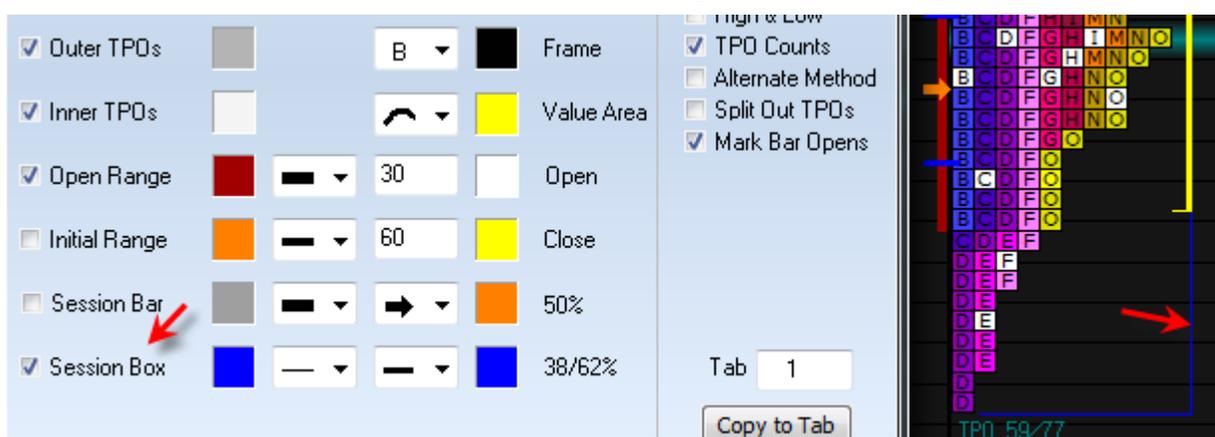
Session Bar – This option will show a bar for the entire session, with an opening and closing hash. The example shows the session bar as a vertical thick gray line.



50% - The Marker and color by the '50%' label are used to show the mid-point of the session. The examples have used an orange arrow.

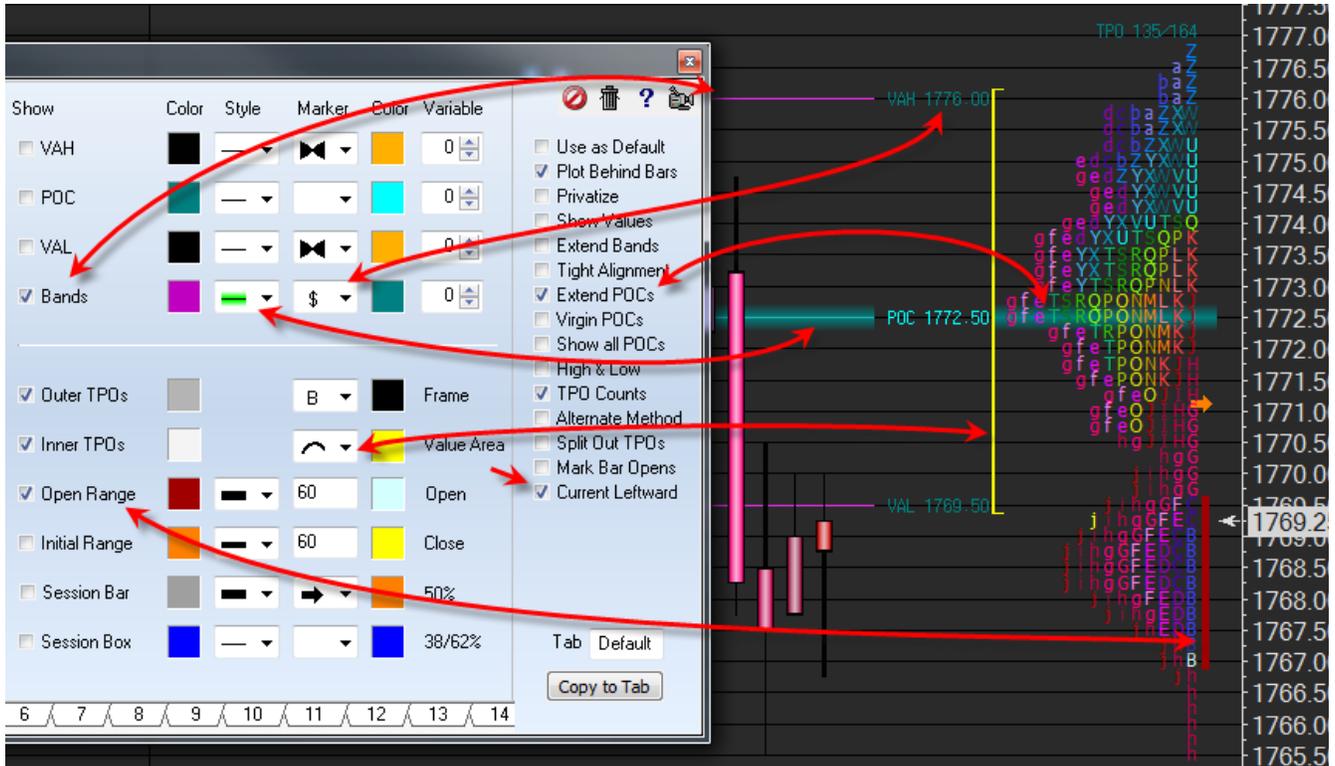
38/62% - Two other percentages of the daily range of popular interest are the Fibonacci retracement levels of 38% and 62%. These can be shown using the marker and color on the '38/62%' row. The example shows these levels marked with blue horizontal lines.

Session Box – Another visual effect is to frame the Histogram with a session box.



Current Leftward

This visual effect will show just the current histogram under construction plotted leftward in the margin of the chart adjacent to the price scale.



Note: The 'VAH', 'VAL', and 'POC' labels show with the prices when the Session Box is unchecked.

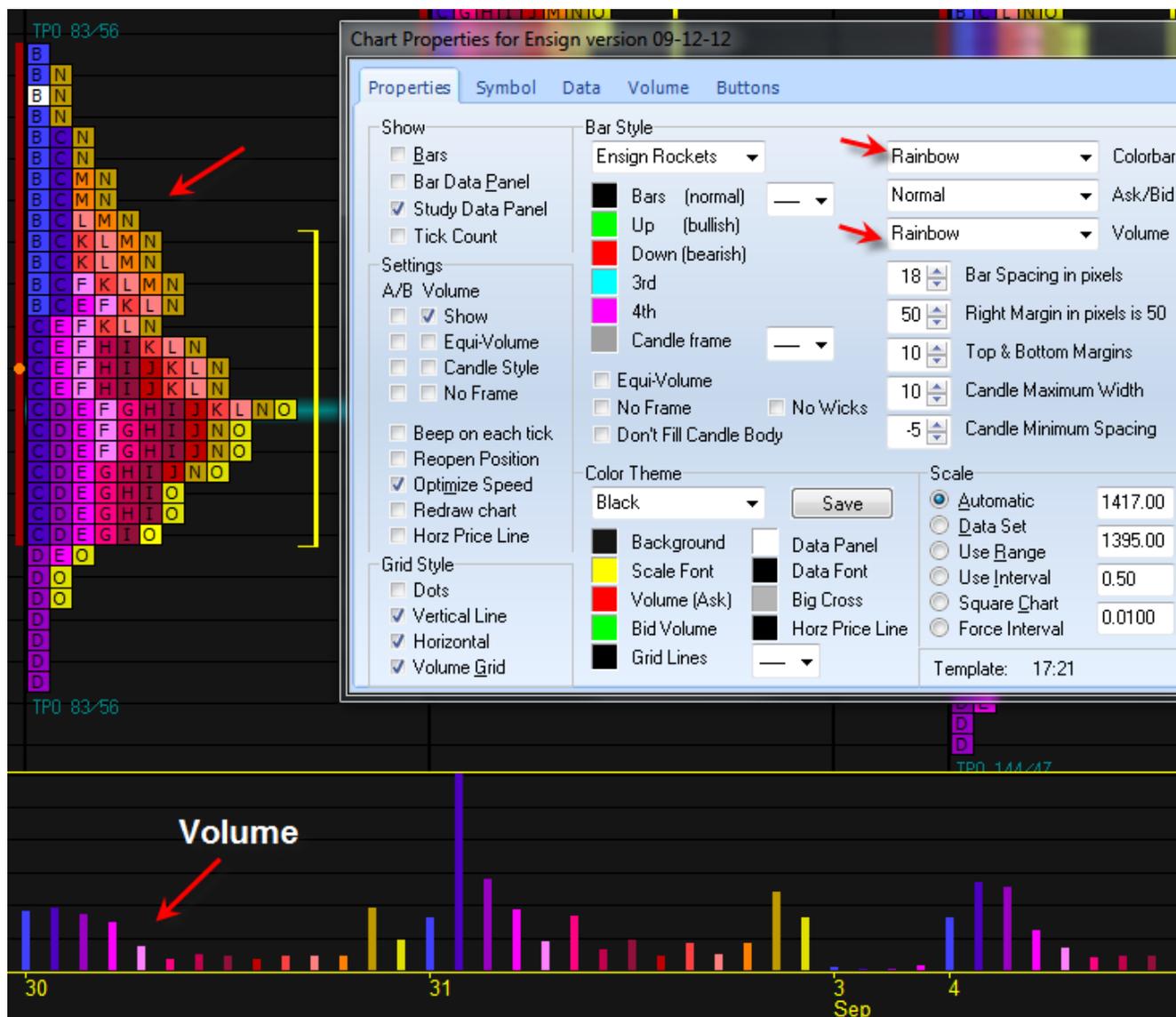
The POC line shows when the Bands box is checked. When Bands is unchecked, the POC line can still be shown by checking the Virgin POC box.

The Extend POCs box controls showing the POC line through the body of the histogram.

This display mode supports the various histogram Styles.

The example is using the Rainbow Color Bars selection.

Volume – A useful visual effect is to show the Volume sub-window and have the volume bars color coordinated with the Histogram period colors. In this example both the bars and the volume are using the Rainbow Color Bar selections.



Price Bars – Press 'B' to toggle on or off the display of the Price Bars. All of the examples have had the price bars hidden, but they could be shown with the Histogram. All studies such as Moving Averages can be shown with the Histograms.