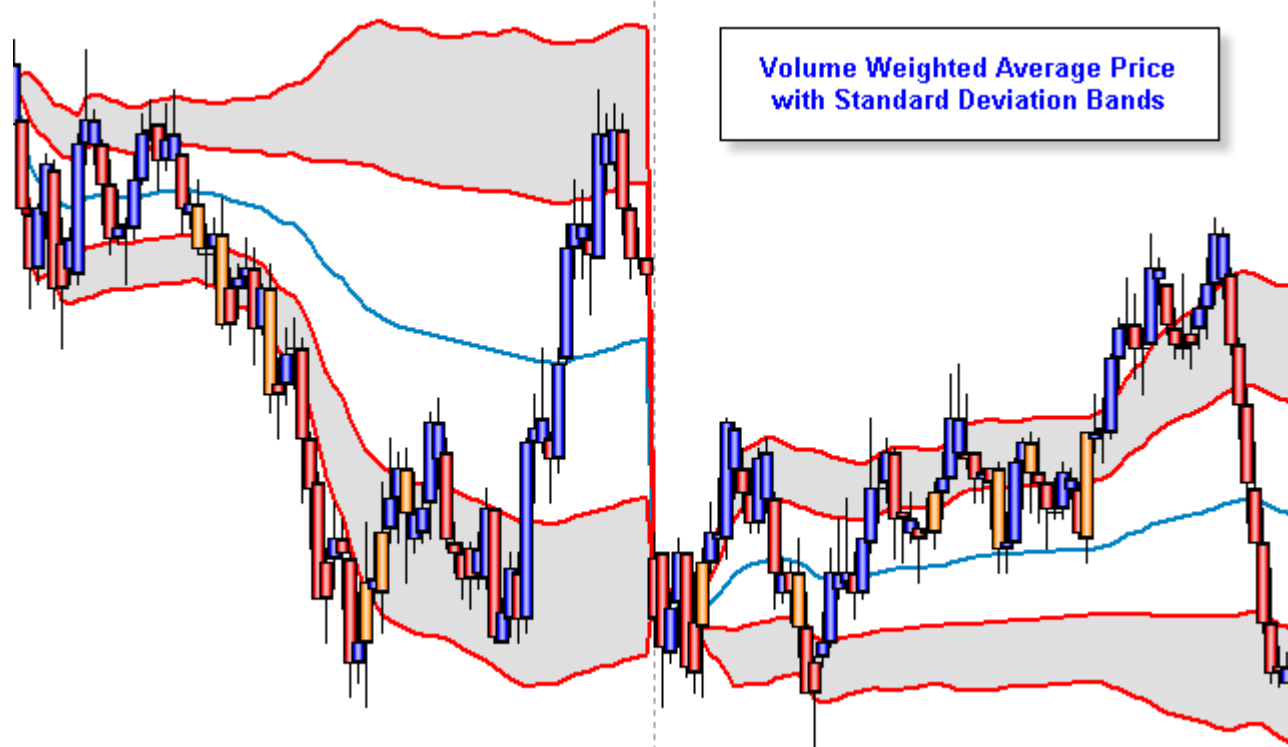


Volume Weighted Average Price

VWAP is a trading acronym for Volume-Weighted Average Price, the ratio of the value traded to total volume traded over a particular time horizon (usually one day). It is a measure of the average price traded at over the trading horizon.

The aim of using a VWAP trading target is to ensure that the trader executing the order does so in-line with volume on the market. Ensign's VWAP is measured across a day from the evening session open through the day session close. The VWAP can be shown with Standard Deviation bands based on the distance of the price from the VWAP. The Multiplier parameter is used to space the bands.



Formula

The VWAP is calculated using the following formula:

$$P_{VWAP} = \frac{\sum_j P_j \cdot Q_j}{\sum_j Q_j}$$

P_{VWAP} = Volume Weighted Average Price

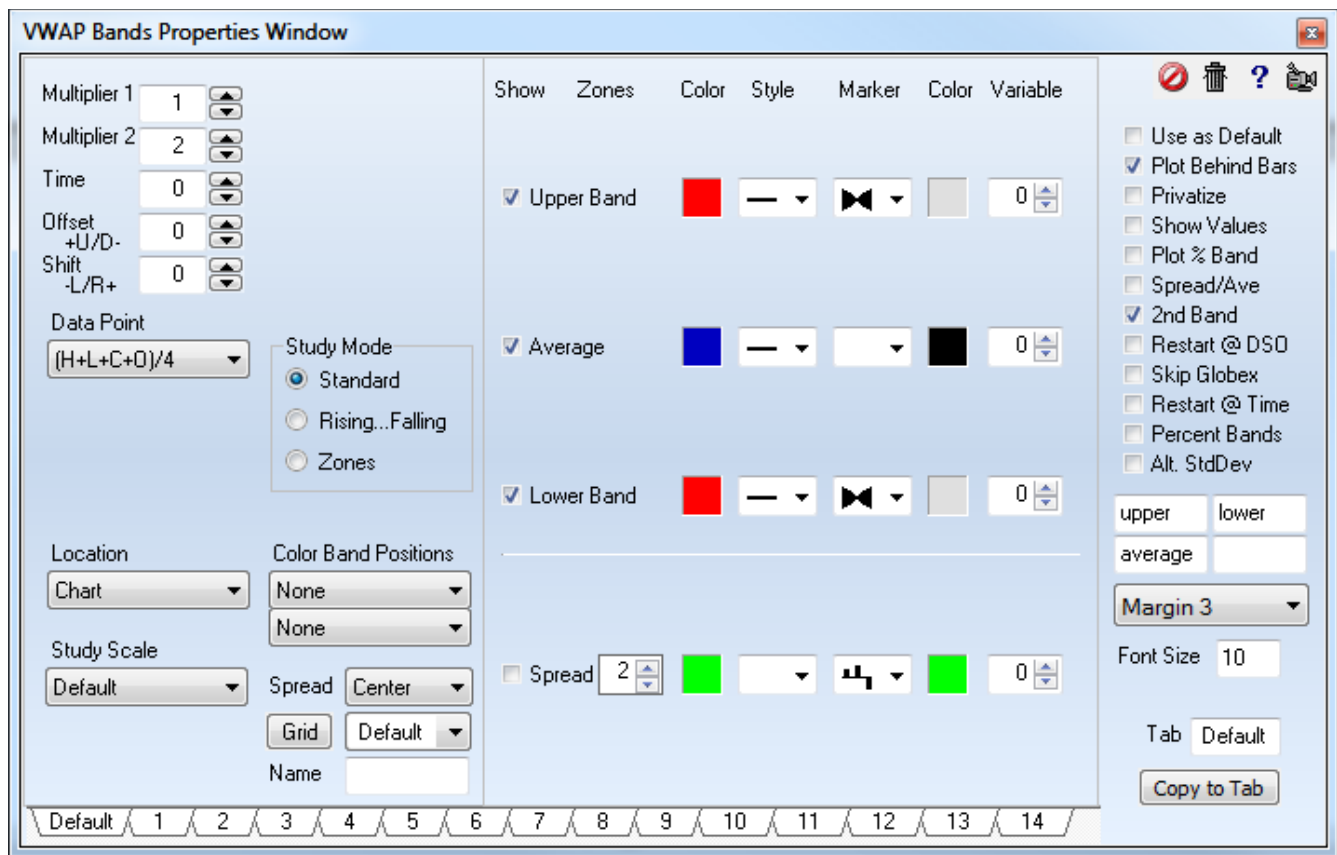
P_j = closing price of bar j

Q_j = quantity (volume) of bar j

j = each bar which covers a period of time, such as a day on a Daily chart.

Upper Band = VWAP + Standard Deviation * multiplier

Lower Band = VWAP - Standard Deviation * multiplier



Reset Options

When Time has a value of 0 the continuous calculation will be across the entire chart instead of across N number of days.

Intraday and Tick based charts reset at the Globex session open by default. Other reset times can be accomplished by using these check box options.

- Restart @ DSO – Reset at Day Session Open
- Skip Globex – Override the default so the Globex session open does not reset.
- Restart @ Time – Reset at a specific time. The Time edit box can have 3 formats:

The Time format of '*hhmm*' will reset daily at the specified Hour and Minute.

Example: 1200 would reset daily at 12:00.

Time can have a format of '*ddhhmm*' where the Day and the Time are specified.

Example: 221200 will reset monthly on the 22nd at 12:00. Time entries that include the Day will ignore the Reset @DSO and the Skip Globex options.

Time can be -1 through -7 for the days of the week, for a weekly open. Use -1 for Sunday.

Example: -1 with both Reset @DSO and Skip Globex unchecked would reset on Sunday's Globex open.

Daily charts can be reset weekly by checking the Restart @ DSO box, or monthly by checking the Restart @ Time box and having a Time entry of 0.

A Time entry of a Day, will reset monthly on that Day of the month.

Example: 20 will reset each month on the 20th.

A Time entry of a Month and a Day, will reset annually on that day of that month.

Example: 415 will reset on April 15th.

A Time entry of a Year, Month and Day will reset on that date, and not plot ahead of that day

Example: 120415 will reset on April 15th, 2013 and start plotting on that day.

Daily charts can also be reset on days of the week, such as every Wednesday. They can be reset once a month, such as on every 3rd Friday, or on the first Monday following the 3rd Friday. This information is encoded in the Time entry as a negative number in this manner.

Example: -2 will reset on each Monday. The days of the week are numbered 1 to 7.

Example: -36 will reset on the 3rd Friday. The first digit is the instance and the 2nd digit is the day of the week. 6 is a Friday. -25 would reset on the 2nd Thursday of the month.

Example: -36.2 will reset on Monday following the 3rd Friday. -36 is the 3rd Friday. Specify the day of the week following as the decimal part of the entry. 2 is a Monday.

Weekly charts can be reset monthly by checking the Restart @ DSO box, or annually by checking the Restart @ Time box and have a Time entry of 0.

A Time entry of a Month, will reset annually on that month.

Example: 10 will reset annually on the 1st bar in October.

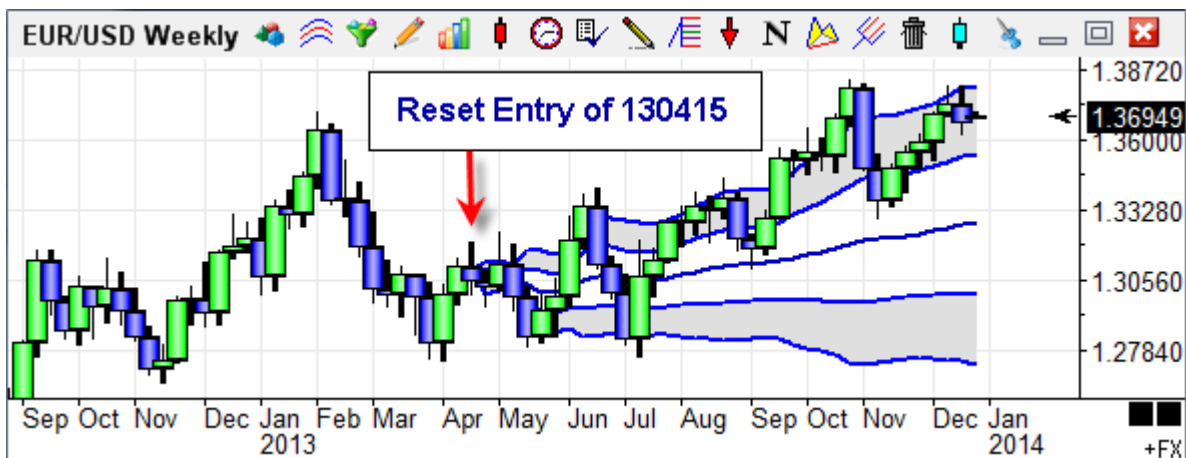
A Time entry of a Month and a Day, will reset annually on that day of that month.

Example: 215 will reset each year on February 15th.

A Time entry of a Year, Month and Day will reset on that date, and not plot ahead of that day

Example: 130415 will reset on April 15th, 2013 and start plotting on that day.

See this example chart with this Time entry to reset on April 15th.



Monthly and Quarterly charts can be reset annually by checking the Restart @ Time box and having a Time entry of 0.

A Time entry of a Month, will reset annually on that month.

Example: 3 will reset each year on the March bar.

A Time entry of a Year and a Month, will reset and start plotting on that month of that year.

Example: 510 will reset on October, 2005.

Yearly chart will reset by checking the Restart @ Time box and having a Time entry of the year. The plotting of the study will begin on that year bar.

Example: 5 will reset on the 2005 bar.

Labels

Enter text in the edit boxes on the right hand side. Use the drop down list to select a location in the Margin for the labels, and a font size. The property form shows labels of 'upper', 'lower', 'average'. The 4th label box is for labeling the 'spread'.

Parameters

- | | |
|---------------|---|
| Plot % Band | – Check to change the Spread plot to show Close as a percent of the Band. |
| Spread/Ave | – Check to change the Spread by dividing by the Average. |
| Percent Bands | – Check this box to change the bands to Percent bands instead of VWAP. |
| Alt. StdDev | – Check to plot a Standard Deviation relative to the final VWAP value. |