# **Volume Ratio Paint Bar Indicator**

The Volume Ratio Indicator is used to measure the Volume Difference and Volume Ratio distribution per Candlestick. It has the ability to take into account Up Trends & Down Trends to eliminate false positives. Due to the nature of TradeStation's Paint Bar capabilities and ultimately the candle needing to be closed before it can paint the bar, it is a lagging indicator. Instead, this indicator has been designed to highlight potential historical pockets of unfilled orders due to an imbalance between buyers and sellers.

As an enhanced feature, I have included Real-Time Sensors to display live Volume Difference & Volume Ratio on the chart to visually see live market volume sentiment. A customer asked; "I want to be able to make entries in buy/sell zones by looking at the high volume differential". These sensors provide real-time confluence for the trader by eliminating the lagging PaintBar Indicator and potentially getting into a trade too late.

The screenshot below illustrates the Real-Time Sensors on the top left of the screen and Volume Ratio & Difference candles painted.



#### Default User Inputs & Customization:

{ Trend Input Variables }

- ✓ iUseTrend(True)
- ✓ iPrice( Close )
- ✓ iFastLength(5)
- ✓ iSlowLength(13)

Trend uses the Volume Weighted Moving Average and is used to weed out some of the false positives. It can be disabled by changing the iUseTrend Input to False. You can manipulate the trend using Inputs iPrice (Open, Close, High, or Low) and iFastLength & iSlowLength is number of bars back you wish the study compute.

Customize PaintBa	ar: ACP_VolumeRatio		×
General			
Inputs	Name	Value	
	iUseTrend	True	
Alerts	iPrice	Close	
Style	iFastLength	5	
Color	iSlowLength	13	
Color	iUSStartTime	930	
Advanced	iUSEndTime	1615	
	iUS_Volume	1000	
	iGlobex_Volume	400	
	iUseRatio	True	
	iRatioLevel	2	
	iHiRatioLongColor	Yellow	
	iHiRatio ShortColor	Magenta	
	iUseVolDiff	False	
	iVolDiff	50 {%}	
	iHiDiffLongColor	Blue	
	iHiDiff ShortColor	Cyan	
	iUseRTSensors	True	
	D <u>i</u> ctionary Default		
Preview Plot			
Edit EasyLanguage OK Cancel Help			

#### Default User Inputs: (Cont'd)

#### { Globex and US Market Input Variables }

- ✓ iUSStartTime( 930 )
- ✓ iUSEndTime( 1615 )
- ✓ iUS\_Volume( 1000 )
- ✓ iGlobex\_Volume( 400 )

iUSStartTime and iUSEndTime is based on the Exchange Time Zone and not the Local PC Time Zone. These Inputs can be changed accordingly for the Symbols Regular Trading Hours (RTH). IE ES S&P would be 930 to 1615 while CL Crude Oil can be changed to 900 to 1430. The time outside of your defined RTH is considered the Globex session. iUS\_Volume and IGlobex\_Volume Inputs allocates the minimum amount of tick movement per candlestick that is allowed before the study will paint the candlestick for the RTH and Globex hours respectively.

## { Ratio Input Variables }

- ✓ iUseRatio( True )
- ✓ iRatioLevel(2)
- ✓ iHiRatioLongColor( Yellow )
- ✓ iHiRatioShortColor( Magenta )

Ratio is a proprietary volume weighted algorithm using live market data. You can disable this feature by changing iUseRatio to False. To find the optimal iRatioLevel for different asset classes, this Input can be adjusted by increments of .1 and starting at any select base number.

### { Volume Difference Input Variables }

- ✓ iUseVolDiff( True )
- ✓ iVolDiff( 50 {%})
- ✓ iHiDiffLongColor( Blue )
- ✓ iHiDiffShortColor( Cyan )

Volume Difference is the percent influence between Volume Up and Volume down. The default setting paints bars with more than a 50% difference than its opposing volume. iVolDiff controls the percentage difference between Volume UP and Volume Down. You can disable this feature by changing iUseVolDiff to False. This is an extremely useful indicator for trading assets such as Copper (HG) where it is difficult to get good readings from using the Ratio algorithm.

### { Real-Time Sensor Input Variables }

✓ iUseRTSensors( True )

Real-Time Sensors are located at the top left of the chart and they display live market volume data for the Volume Ratio and Volume Difference algorithms. This can be a very useful tool to evaluate market sentiment for confirmation entries. Due to the nature of TradeStation's PaintBar Studies which only paints the bar at the bars close they are lagging studies and we miss the Real-Time energy occurring for the building of the bar. These sensors provide the Trader Real-Time market volume sentiment whilst the bars are being created. These sensors are optional and can be removed by changing this input to False. To change the candlesticks color using the Color Inputs above, please follow this link to TradeStation's Color Class to identify your choices:

http://help.tradestation.com/10\_00/eng/tsdevhelp/Subsystems/elobject/class\_win/color\_class.htm

Copper (HG) on a 150 Tick chart using Volume Difference Algorithm



S&P 500 (ES) on a 1 Minute Chart using The Volume Ratio Algorithm



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