



## Bollinger Bands® Volatility Breakout (Method I) Manual

### About the Methods:

Welcome to the Bollinger Band Methods for Trade Station. There are four Bollinger Bands Methods offered on Trade Station. You have subscribed to Method I. Methods I-III were originally presented in John Bollinger's book, "Bollinger on Bollinger Bands." They illustrate three different approaches to trading with Bollinger Bands. Method IV was developed after the book and is a variation of Method I with an interesting twist.

Though these techniques were developed on daily charts, they can be used in any time frame. There is no material difference as long as there is sufficient data in each price bar at that time frame. If you look at the chart of a security in a shorter time frame and find that there are frequently bars with no trades during that period, or if you find the open and close of the bars are often also the high and low, then there may not be sufficient data to accurately power the indicators.

Find more information and video support at: <https://www.bollingerbands.com/tradestation-methods>

### About Method I:

Perhaps the most elegant direct application of Bollinger Bands is a volatility breakout system. These systems have been around a long time and exist in many varieties and forms. The earliest breakout systems used simple averages of the highs and lows, often shifted up or down a bit. As time went on the average true range was frequently a factor.

Method I is commonly known as the Squeeze Breakout and takes advantage of the cyclical nature of volatility. The core idea is that low volatility is known to beget high volatility, so Method I looks for stocks with historically low volatility, also known as a Squeeze. The Squeeze is the crucible in which new trends are formed. The Method I package screens lists of stocks for opportunities where a stock is in the process of breaking out of the Bollinger Bands following a Squeeze and anticipating that an expansion of volatility may follow. In general we find the most success with securities that undergo a relatively brief squeeze and then break out quickly.

### Included Indicators:

Method I includes a TradeStation Workspace and an EasyLanguage file with the relevant studies. To allow personal customization, each study has one or more input parameters that allow you to modify the study calculation to adjust for frequency of alerts and various trading styles. Remember if you change an input in one study, you must change that same input in all other similar studies in both

charting and RadarScreen so that the indicator values match correctly and the RadarScreen scan matches as well.

### **RadarScreen Studies:**

- BBM1 – Squeeze Breakout
- BBM – %b
- BBM – %bw

### **Chart Studies:**

- BBM – Bollinger Bands
- BBM – Bollinger Bars
- BBM – BandWidth
- BBM1 – Squeeze Breakout

## **Indicator Explanations:**

### **Bollinger Bands**

Bollinger Bands are adaptive trading bands that answer the question “Are prices high or low?” on a relative basis. The adaptive mechanism is volatility. The middle band is a simple moving average with a default period of 20. The upper and lower bands are spread above and below the middle band by a multiple of standard deviation, with the default multiplier being two.

- $\text{MiddleBB} = \text{Average}(\text{close}, 20)$
- $\text{UpperBB} = \text{MiddleBB} + 2.0 \times \text{Standard Deviation}(\text{close}, 20)$
- $\text{LowerBB} = \text{MiddleBB} - 2.0 \times \text{Standard Deviation}(\text{close}, 20)$

### **%b**

%b (Percent b) was one of the first two indicators derived from Bollinger Bands. It employs a variation on the formula for Stochastics. %b depicts the location of the most recent close within the Bollinger Bands. At 1.0, the close is at the upper band, at 0.0 the close is at the lower band and at 0.5 the close is at the middle band. A %b reading of 1.1 means that you are above the upper band by 10% of the width of the bands, -0.2 means that you are below the lower band by 20% of the width of the bands.

### **BandWidth**

BandWidth was one of the first two indicators derived from Bollinger Bands. BandWidth depicts how wide the Bollinger Bands are as a function of the middle band. The formula is  $(\text{upperBB} - \text{lowerBB}) \div \text{middleBB}$ .

The most popular use of BandWidth is to identify The Squeeze, which is a 125-period low for the indicator. A Squeeze is very helpful in diagnosing the beginning of trends. The opposite of The Squeeze, The Bulge, is useful in diagnosing the end of trends. The Mode column in the RadarScreen will show whether a security is currently in a Squeeze.

In the version of BandWidth created for the Method I chart there are a few items of note. You will see an upper red line indicating the level for a Bulge and a lower green line indicating the level for a Squeeze. Running just inside those lines you see a set of dotted lines, these are a buffer zone that you can adjust to impact the number of signals the Method will produce. The default buffer level is 3%, but by increasing the level you will see more signals, or by decreasing the level you will see fewer signals.

### **% BandWidth**

%BandWidth uses the formula for Stochastics to normalize BandWidth as a function of its n-day look-back period. 125-periods is the default, but you may choose your own look-back period. 1.0 equals the highest BandWidth in the past n periods, while 0.0 equals the lowest BandWidth in the past n periods. If you use 125 as the look-back period, then 0.0 = The Squeeze and 1.0 = The Bulge. The interpretations are similar to BandWidth, but some find the normalized, or closed presentation more intuitive. %BandWidth, along with %b, are the two primary building blocks for Bollinger Band trading systems.

### **Squeeze Breakout/Method I**

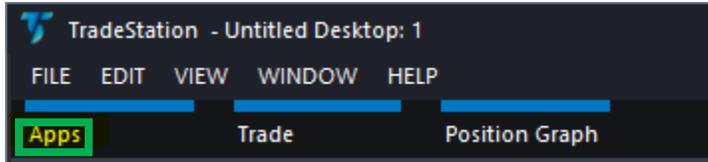
This alert will be triggered either Long or Short depending on the conditions of Method I. If a security has been in a Squeeze and price breaks out above the upper Bollinger Band a Long Alert will be triggered. Alternately if there has been a squeeze and it is followed by a breakdown of price below the lower Bollinger Band, a Short Alert will be triggered.

The RadarScreen provides details surrounding the alerts in the 4 columns that come with Method 1, Alert, Alert Count, Mode, and Squeeze Count. The first column, Alert, indicates when a Volatility Breakout signal has been triggered. You will see that after the New Buy or New Short there is a number in parenthesis. This indicates the number of consecutive signals. The next column, Alert Count, indicates the number of bars (days) since there has been a signal for that security. Sorting on this column allows you to locate prior signals. The Mode column indicates whether the security is currently experiencing a squeeze. The Squeeze Count column tells you how long, in bars, the squeeze has been going on continuously.

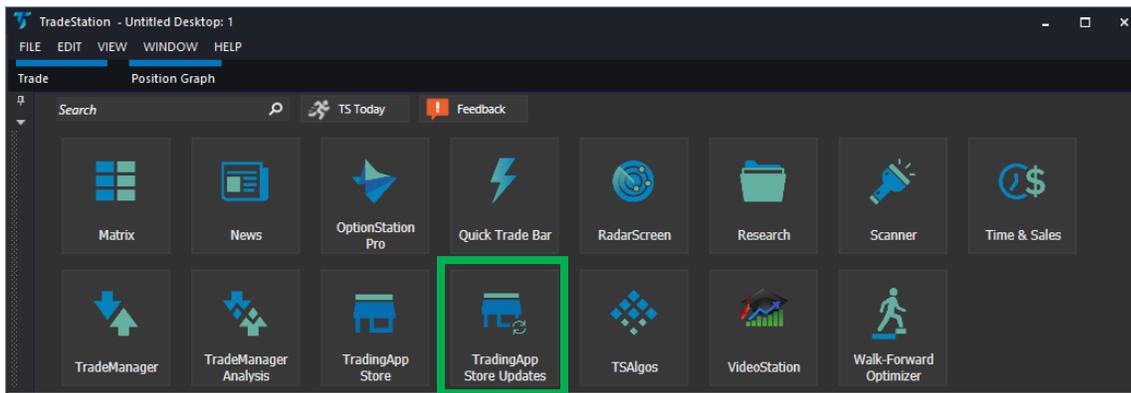
A common question regarding Method 1 alerts is how a security can have a current alert and not also be in a Squeeze. That is because there is a five day lookback period for a Squeeze built into the alert, so for example if a security was in a squeeze two days ago, but leaves the squeeze and breaks out above the upper Bollinger Band today that stock will trigger an alert without being in a Squeeze.

## Installation:

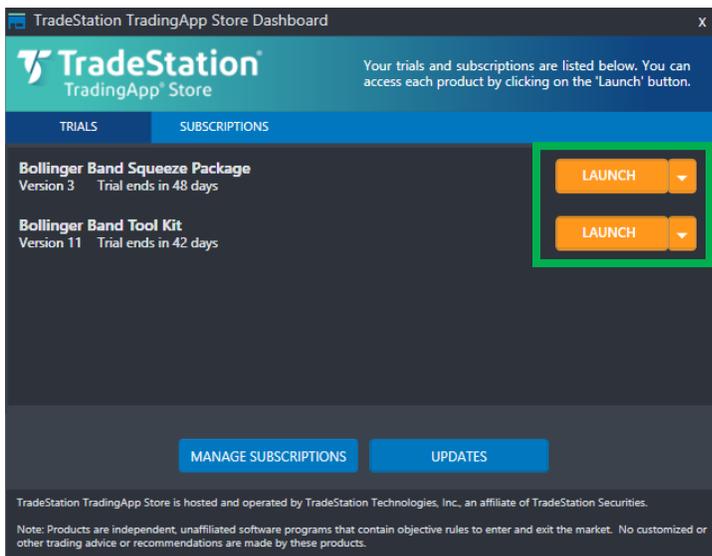
To launch the Method I workspace in TradeStation 10: go to the “Apps” Menu under File in the upper left:



Click on “TradingApp Store Updates”.

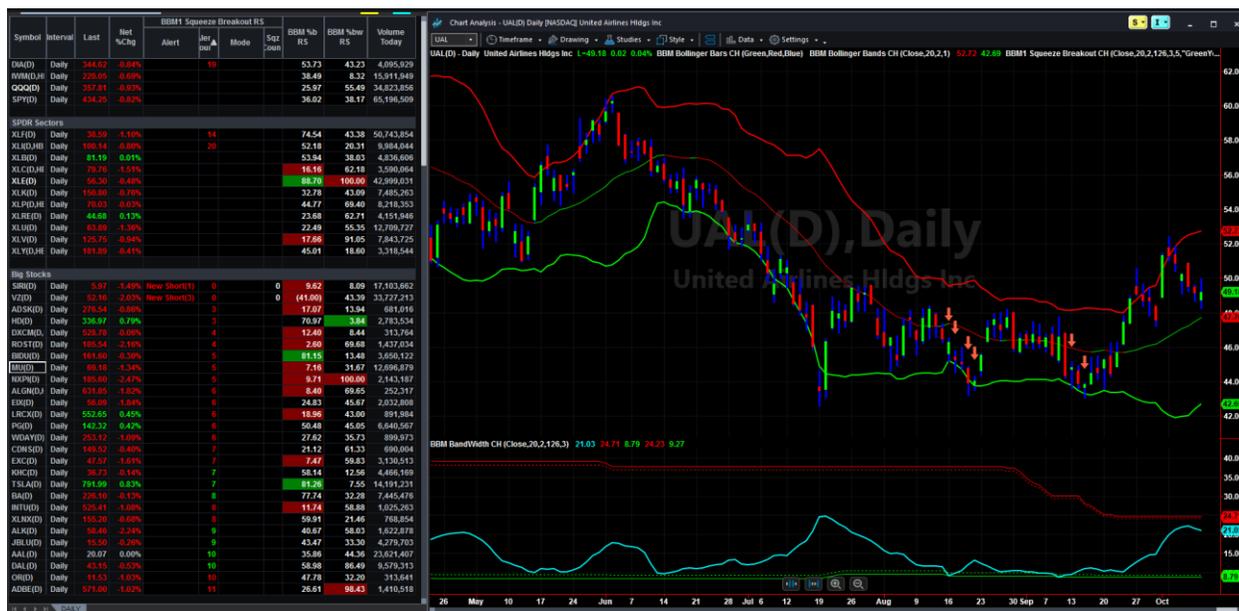


Find the Bollinger Method Package you want to access and click “Launch”.



Note: if you do not see your Bollinger Band Method Package; first double check ‘Manage Subscription’ in the AppStore to make sure the subscription is active in your account, then try shutting down TradeStation and restarting your computer. Then restart TradeStation.

The workspace will display as follows:



Once the Workspace has opened, we suggest that you rename and save that workspace so you always have the original version if needed. Goto File~Workspaces~Save Workspace As... You can also right click on the workspace tab and rename it from there.

Thank You and Good Trading!

This product is not a recommendation to buy or sell, but rather a guideline to interpreting the specified analysis methods. The information provided should only be used by investors who are aware of the risks inherent in securities trading. TradeStation, John Bollinger or Bollinger Capital Management accept no liability whatsoever for any loss arising from any use of this product or its contents.

Past performance, whether actual or indicated by historical tests of strategies, is no guarantee of future performance or success. There is a possibility that you may sustain a loss equal to or greater than your entire investment regardless of which asset class you trade (equities, options, futures or forex); therefore, you should not invest or risk money that you cannot afford to lose. If you plan to use margin, [please read about the risks of margin.](#)