

## Chapter 9 - Bollinger bands

[Bollinger Bands Help](#) | Help Guide

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The Bollinger Band Ranker allows the user to create stock lists based on Bollinger Bands. These rankings can use Bollinger Band breakout, Bollinger Band Bandwidth, and Bandwidth ratios over different time frames. The RSI ranks stocks using Wilder's Relative Strength Indicator. You can find stocks with the lowest number of trading days in an RSI range or the highest number of trading days in an RSI range. Read the RSI help file at [RSI Help](#). RSI can be reached directly by clicking RSI in Bollinger/RSI links.

Bollinger Bands are constructed by taking the mean and the standard deviation of the close prices over the same recent time period. The high band is the stock price two standard deviations above the mean. The low band is the stock price two standard deviations below the mean. These are the equations behind the Bollinger Band:

- **Mean** - The stock close prices for the time period selected are averaged together to form the mean.

$$\text{Mean} = [ \text{Sum from 1 to n} \{ \text{Closing Prices} \} ] / n$$

n is the number of days used in the Bollinger Band.

- **Standard Deviation** - The standard deviation (Std. Dev.) of the stock close prices is found for the same time period of the mean

$$\text{Std. Dev.} = \text{square root of } [ (\text{Sum from 1 to n} (\text{Close Price}-\text{Mean})^2) / (n-1) ]$$

- **High Bollinger Band** - Mean + 2\*(Std. Dev.)
- **Low Bollinger Band** - Mean - 2\*(Std. Dev.)

The Bollinger Band develops trading signals based on where the last stock price close is relative to the bands and how much the Bands have constricted. The location of the recent stock close price within the Band is constructed using a percentage called %b as follows:

$$\%b = 100 * (\text{Latest Stock Close} - \text{Low Bollinger Band}) / (\text{High Bollinger Band} - \text{Low Bollinger Band})$$

Bollinger Band constriction is measured using the Bollinger Band Bandwidth called BW which is constructed as follows:

$$\text{BW} = (\text{High Bollinger Band} - \text{Low Bollinger Band}) / \text{Mean}$$

Bollinger Band constriction is also referred to as The Squeeze. ( see "Bollinger on Bollinger Bands", John Bollinger, McGraw-Hill, 2002.)

The rankings that are created on the Platinum web site using Bollinger Bands are as follows:

- Breakout Hi Using Short BB  
Stocks are ranked by highest %b using the short Bollinger Band.
- Breakout Low Using Short BB  
Stocks are ranked by lowest %b using the short Bollinger Band.
- Lowest Short BB Bandwidth (possible Squeeze)  
Stocks are ranked by lowest Short Bollinger Band Bandwidth.
- Lowest Short BW / Long BW (Squeeze)  
Stocks are ranked by lowest of the Short Bollinger Band Bandwidth / Long Bollinger Band Bandwidth.

Past studies have yielded these popular values for the days used in Bollinger Bands and RSI

- The most common BB days value is 20 days for breakouts and is the days recommended by Bollinger in his recent book.
- 10 and 30 days are two other periods mentioned.
- The Squeeze indicator typically uses a 100 to 120 day long Bollinger Bandwidth and a 20 to 30 day short Bollinger Bandwidth.

The input parameters are shown next:

**Bollinger Bands**
[Help ???](#)

**Rank Stocks using Bollinger Bands and RSI.**
Click Help ? to learn how to use this ranker. ↑

**Step 1 : Specify Ranking Criteria**

**Ranking Criteria:**

Short BB Breakout Hi   
 Short BB Breakout Low   
 Short BW Lowest Bandwidth

Short/Long BW Lowest Ratio   
 RSI Lowest   
 RSI Highest

**Number of stocks displayed in Output Table**

50   
 100   
 200   
 500

**Bollinger Band Standard Deviation:**

**Number of days for Long Bollinger Band:**

**Number of days for Short Bollinger Band:**

**Number of days for RSI (<=Short Days):**

**Step 2 : Choose Stocks to Rank**

**Use Stocks in the list:**

Hi IVs ▼

**Or use Stocks matching these criteria:**

Minimum Average  Day Stock Volume:

Minimum Stock Price:

Maximum Stock Price:

**Choose display option:**

Show Only Stocks That Meet Breakout Criteria  
 Show All Stocks

**Step 3: Perform a new**

**RANKING**

Ranking Elapsed Time:  ~15s max

Below Step 1 is the desired ranking. The choices are:

- **Breakout Hi Using Short BB** - This ranker is useful for determining when stocks have broken through the high band. Sometimes its a major breakthrough.
- **Breakout Low Using Short BB** - This ranker is useful for determining when stocks have broken through the low band. Sometimes its a major breakthrough.
- **Lowest Short BB Bandwidth** - This ranker shows stock that potentially could be making a move up or down.
- **Lowest Short BW / Long BW (Squeeze)** - These stocks are trading in a narrow channel now and have not traded in this narrow channel in the past. These are the stocks being squeezed and are likely to breakout high or low.
- **High and Low RSI** - These stocks have been in an RSI range for a long time or just recently.

The web site defaults to Lowest Short BW / Long BW (Squeeze).

The next selection is the number of ranked stocks displayed in the web page stock ranking table. There are five selectable options of 10, 20, 50 and 100 stocks. After you create a stock ranking table, you are allowed to save the ranked stocks in your online stock lists. The number of stocks displayed is the most number of stocks that can be saved in a list. The default value is 50.

The next selections are the integer days in the long and short Bollinger Bands and the RSI days. The long days must be greater than the short days, and both must be greater than 0. The long days can be increased until the web site exhausts the online database. The web site has past stock data to 01/03/2000. The days for the short Bollinger Bands setting comes from Charts > Stock Charts. Change the short Bollinger Bands days here or in Stock Charts and the web site remembers the most recent change. Typical default values are 120 long days and 20 short days. The RSI days for the Bollinger Bands also comes from the setting in Charts > Stock Charts. Typical default RSI days is 14. The RSI days must be less than are equal to the Short Bollinger Band days. The standard deviation for the Bollinger Bands also comes from the setting in Charts > Stock Charts. A typical standard deviation value is 2.

The next selection is the input stock list. The user can select one of the online stock lists or create a list of stocks using three selections. If the input stock list is chosen, the stocks in the list are ranked without regard to volume or price.

If the second option is chosen, all online stocks are filtered using the selections shown. Then they are ranked. The first of the three selections is the minimum average stock volume. The default is 300,000.

Your second and third selections are "Minimum Stock Price" and "Maximum Stock Price". Only stocks with current stock close prices within this range of prices are ranked. The stock prices in the past are NOT required to meet the price range. The web page uses the minimum and maximum stock price values set in General Settings for "Access Stock List Ranker" as the initial default values.

Once you have made your selections, click the RANKING button next to Step 3. To the right of the RANKING button is a clock timer. The timer starts when you click the button. The server ranking time is limited to 45 seconds. Network time to transfer the data back to your web page can take awhile, depending on your connection, so the timer can exceed 45 secs.

Two different web page results can occur depending on how much time your search takes, how many stocks are being searched and the number of users online. If all the stocks are ranked successfully, a web page similar to the one below appears:

Short/Long BW Lowest Ratio   
 RSI Lowest   
 RSI Highest

**Number of stocks displayed in Output Table**  
 50   
 100   
 200   
 500

**Bollinger Band Standard Deviation:**   
**Number of days for Long Bollinger Band:**   
**Number of days for Short Bollinger Band:**   
**Number of days for RSI (<=Short Days)**

**Use Stocks matching these criteria:**  
 Minimum Average  Day Stock Volume:  
  
 Minimum Stock Price:  
  
 Maximum Stock Price:

**Choose display option:**  
 Show Only Stocks That Meet Breakout Criteria  
 Show All Stocks

**Step 3:** 2098 stocks were found in Step 2 and the top 200 that satisfied the search are shown below.  
 Save top  Stocks into the List named:   
 Or select a different List:

**Step 4:** Perform a new  Ranking Elapsed Time:  ~10s max

**Stocks ranked using Lowest of Short Bandwidth / Long Bandwidth (The Squeeze)**  
**Long Bollinger Band Days = 120    Short Bollinger Band Days = 20**

Click a stock symbol to get the chart. New window size:

Rk	Stock	Stock Close	Short 20 Day Hi BB	Short 20 Day Low BB	Short %b	Long 120 Day BW	Short 20 Day BW	Short/Long BW	Average 1 day Stock Volume
1	<a href="#">UDI Chart</a>	74.39	74.54	73.61	83.92	0.86	0.01	0.01	367800
2	<a href="#">TIWI Chart</a>	15.26	15.41	15.17	39.08	0.49	0.02	0.03	438847
3	<a href="#">CCRD Chart</a>	16.88	16.99	16.30	84.46	0.99	0.04	0.04	480770
4	<a href="#">TKTX Chart</a>	34.20	34.64	33.58	58.14	0.66	0.03	0.05	369900
5	<a href="#">BKST Chart</a>	20.15	20.03	19.43	120.32	0.53	0.03	0.06	311177
6	<a href="#">DRI Chart</a>	13.15	15.13	13.43	-16.26	1.64	0.12	0.07	2024400

Next to Step 3 the web page shows how many stocks were found satisfying your ranking and how many appear in the stock ranking table. Next to "Save" you can input in the text box the number of ranked stocks you wish to keep. The maximum number is the number of stocks shown in the stock ranking table. To the right of "Save" you can select any of the 20 online stock lists as the list that will accept the ranked stock list. Above the stock list selection you can backspace out and type in a new name for the stock list with which you are working. The list and the name are saved online when you click the Save button to the right of the stock lists. The stocks previously saved in the list selected are deleted when the new ranked stock list is saved.

If all the stocks filtered were not ranked successfully because the search ran out of the allocated time, a web page similar to the one below appears:

**Bollinger Band Standard Deviation:**   
**Number of days for Long Bollinger Band:**   
**Number of days for Short Bollinger Band:**   
**Number of days for RSI (<=Short Days)**

Maximum Stock Price:

**Choose display option:**  
 Show Only Stocks That Meet Breakout Criteria  
 Show All Stocks

**Step 3:** 2098 stocks were found in Step 2 and 1238 satisfy the search so far.  
 the last ranking. (Dont understand this button, click [Help](#) )

Step 4: Save top  Stocks into the List named:   
 Or select a different List:

Step 5: Perform a new  Ranking Elapsed Time:  ~10s max

**Stocks ranked using Lowest of Short Bandwidth / Long Bandwidth (The Squeeze)**  
**Long Bollinger Band Days = 120    Short Bollinger Band Days = 20**

Click a stock symbol to get the chart. New window size:

Rk	Stock	Stock Close	Short 20 Day Hi BB	Short 20 Day Low BB	Short %b	Long 120 Day BW	Short 20 Day BW	Short/Long BW	Average 1 day Stock Volume
1	<a href="#">UDI Chart</a>	74.39	74.54	73.61	83.92	0.86	0.01	0.01	367800
2	<a href="#">TIWI Chart</a>	15.26	15.41	15.17	39.08	0.49	0.02	0.03	438847
3	<a href="#">CCRD Chart</a>	16.88	16.99	16.30	84.46	0.99	0.04	0.04	480770
4	<a href="#">TKTX Chart</a>	34.20	34.64	33.58	58.14	0.66	0.03	0.05	369900
5	<a href="#">DRI Chart</a>	13.15	15.13	13.43	-16.26	1.64	0.12	0.07	2024400
6	<a href="#">SDS Chart</a>	34.51	34.62	33.28	92.04	0.50	0.04	0.08	3996700
7	<a href="#">RGE Chart</a>	14.77	15.44	14.01	52.97	1.13	0.10	0.09	373500
8	<a href="#">BIIB Chart</a>	37.99	40.38	36.47	38.91	1.11	0.10	0.09	3004710

Next to Step 3 the web page shows how many stocks were found satisfying your ranking and how many stocks have been ranked thus far. The web page ranking has a time limit of ~45 secs. If you reach this time limit, the ranking results thus far are returned to the web page. You have the option of continuing the ranking, which resumes where it left off, by clicking the RANKING button in Step 3. You can repeat this until all the stocks are searched and the extra RANKING button no longer appears on the web page. The table will reflect the ranking from all stocks searched. If you decide to repeat the ranking until all stocks are ranked, do not change any of the search filter settings until the ranking is complete.

The reason for the time limit is to prevent the browser from timing out and to distribute the server load between the users. A browser time out can occur if the ranking takes too long to complete.

In both of the cases discussed above a new search can be started at any time by clicking the RANKING button in the last Step shown.

The above ranked stock table is for an Short/Long BW. The columns are:

- **RK** - Rank. This is the initial ranking of the stock symbols.
- **Stock** - The stock symbol and a Chart symbol. Clicking the Chart symbol takes you to the Chart > Stock Charts web page with Bollinger Band charts loaded.
- **Stock Close** - The latest stock closing price.
- **Short 20 Day HI BB** - The short hi Bollinger Band value.
- **Short 20 Day Low BB** - The short low Bollinger Band value.
- **Short %b** - The short Bollinger Band recent stock close percentage within the bands.
- **Long 120 Day BW** - The long Bollinger Band Bandwidth.
- **Short 20 Day BW** - The short Bollinger Band Bandwidth.
- **Short/Long BW** - The ratio of the short BW divided by the long BW.
- **Average Volume** - The latest stock (not option) average trading volume.

These are trading strategies that traders have used in the past.

Ranking	Explanation	Trades
Rank on Short BB Breakout Hi	These stocks are showing the beginning of an up trend.	Bullish such as Buy Calls or Put Credit Spreads.
Rank on Short BB Breakout Low	These stocks are showing the beginning of an down trend.	Bearish such as Buy Puts and Call Credit Spreads.
Rank on Short BW/Long BW. Save list and rerank in "Access the Stock List Ranker" using cheap percentile IV.	These stocks are trading in a narrow channel and potentially could break out. IV usually also decreases as the stock price displays no trend.	Look to capture quick profit using Buy Straddles on cheap options.