

# StockFinder 5 Workbook

Updated February 2010





## STOCKFINDER 5 WORKBOOK

---

Worden Brothers, Inc.  
[www.Worden.com](http://www.Worden.com)

**Five Oaks Office Park  
4905 Pine Cone Drive  
Durham, NC 27707**



## STOCKFINDER®5 WORKBOOK

---

© 2010 Worden Brothers, Inc.

All rights reserved. Printed in the United States of America. Except as permitted under the Copyright Act of 1976, no part of this publication may be reproduced or distributed in any form or by any means, or stored in a database or retrieval system, without the prior written permission of the publisher.

Information has been obtained by Worden Brothers, Inc. from sources believed to be reliable. However, because of the possibility of human or mechanical error by our sources, Worden Brothers, Inc. does not guarantee the accuracy, adequacy or completeness of any information contained herein and is not responsible for any errors or omissions or the results obtained from the use of such information.

StockFinder®, RealCode, BackScanner, TeleChart®, Balance of Power, MoneyStream, and Time Segmented Volume are trademarks or registered trademarks of Worden Brothers, Inc. All rights reserved.

**www.Worden.com**  
**Worden Brothers, Inc,**  
**Five Oaks Office Park**  
**4905 Pine Cone Drive**  
**Durham, NC 27707**  
**Customer Service: 1-800-776-4940**  
**Technical Support: 1-919-408-0542**  
**Fax: 1-919-408-0545**

---



# StockFinder® 5 Workbook

Table of contents .....	1
1. Unusually High Trading Range .....	2
2. Price Above 20 and 50 Simple Moving Averages.....	4
3. Adding a Comparison Symbol .....	6
4. ADX Values over Forty .....	8
5. Bollinger Band Breakout.....	10
6. Bouncing off the Bottom Band.....	12
7. Charts with Different Time Frames .....	14
8. Creating a TRIX Histogram.....	16
9. Compare Multiple MACD Histograms.....	18
10. Price Down Ten Percent in a Month .....	20
11. Falling P/E Ratio .....	22
12. Filter Out Low Volume Stocks .....	24
13. Identifying News Surges .....	26
14. Increasing Buy Ratings .....	28
15. MACD Histogram Turning Positive.....	30
16. Making or Challenging Highs in Price .....	32
17. Moving Averages Crossing.....	34
18. Oversold Stochastics .....	36
19. Paint Down Sloping Price .....	38
20. Paint Price by the Close in the Range.....	40
21. Price Between \$10 and \$50 .....	42
22. Price Moving Up Several Days in a Row .....	44
23. Price Pulling Back after an Uptrend.....	46
24. Ranking by Average Trading Range .....	48
25. Price Staying Above a Moving Average .....	50
26. Stocks with Above Average Volume .....	52
27. Tightening Bollinger Bands .....	54
Appendix: Exercises by Category .....	56

# 1. Unusually High Trading Range

## GOAL

To isolate stocks with a higher than normal trading range on the most recent price bar.

## CATEGORY

RealCode, Moving Average, Unusual Activity, Sorting

## METHOD

Create a *RealCode* indicator for the trading range of a stock and a moving average of that indicator to use as conditions for finding stocks with above average trading range.

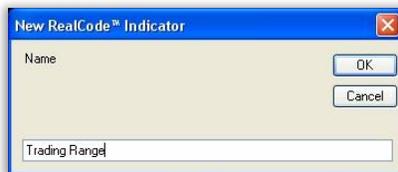
## STEPS

Here is a step-by-step guide for this exercise. For an alternative method to the steps in this lesson, refer to the *RealCode Reference 2nd Edition* (pp. 63-68).

**Step 1** Click the *Add Indicator* icon  and select *New RealCode Indicator* from the menu.



**Step 2** Name the indicator *Trading Range*. Click *OK*.



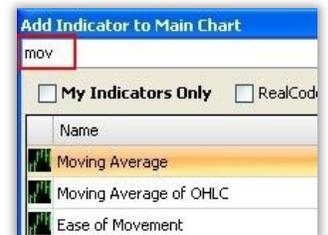
**Step 3** Enter the following *RealCode* on line 7 in the *RealCode Editor*. Click *OK*.



**Step 4** Right-click the *Trading Range* Indicator and choose *Add Child Indicator* from the drop-down menu.



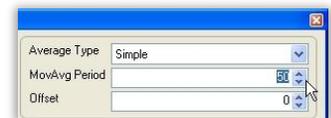
**Step 5** In the *Add Indicator to Main Chart* editing box type 'mov' in the *Type to Search* field and choose *Moving Average* from the list. Click *OK*.



**Step 6** Right-click *MovAvg 30* and choose *Edit* from the drop-down.



**Step 7** In the *Edit MovAvg* window change the *MovAvg Period* on the right from 30 to 50. Click *OK*.



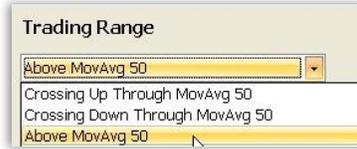
**Step 8** Left-click and drag the *Trading Range* indicator to its *Moving Average* (the word *Compare* and an image of the indicator will appear).



**Step 9** Release the mouse button and choose *Create Condition* from the menu that appears.



**Step 10** Click on the arrow by the drop-down menu and choose *Above MovAvg 50*.



**Step 11** In the *Edit* window, move the *Smart Slider* up to *Way Above*. Click *OK* to add the condition to the chart.



**Step 12** There is now a single *Condition Bubble* on the price chart for *Trading Range Above Moving Average*.



**Step 13** Click the *Condition Bubble* to sort the current WatchList by the new condition and paint the price bars whenever the condition is true.



## RESULTS

Every stock in the WatchList with *Sort Lights* passed the Condition and they are grouped at the top of the WatchList.

### Sort

Grouped below those with lights will be the stocks in the WatchList with the most recent occurrences of the condition (ascending in value from 1 bar since true).



### Paint bars

Finally, the price bars will be painted for the entire stock history every time the condition occurs.

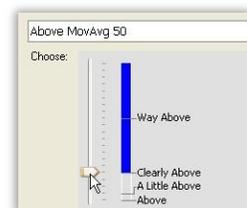


## REMEMBER

Some additional notes on using the tools in this exercise:

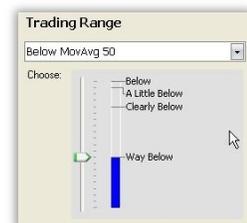
### Limit Range Surge

Changing the *Smart Slider* from *Way Above* to *Clearly Above* will light up more stocks by requiring less of a trading range surge.



### Unusually Small Range Surge

Change *Above MovAvg 50* in the Condition to *Below MovAvg 50* and slide the *Smart Slide* to *Way Below* to light up stocks experiencing unusually small trading ranges on the current bar.



## 2. Price Above 20 & 50 Bar Simple Moving Averages

### GOAL

To isolate stocks currently above both their 20 and 50 bar simple moving averages.

### CATEGORY

Price, Moving Average, Sort

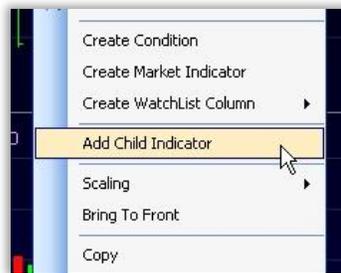
### METHOD

After adding both moving averages, create a Condition for price being above each of the averages. Sort a WatchList using the combined Conditions on a daily and weekly chart. Stocks with *Sort Lights* for both Conditions are trading above both averages on the chart.

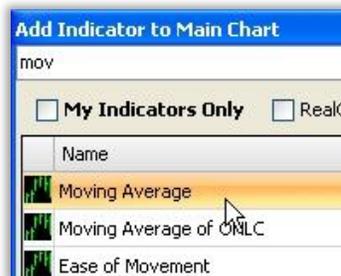
### STEPS

Here is a step-by-step guide for this exercise. For an alternative method to the steps in this lesson, refer to the RealCode Reference 2nd Edition (pp. 63-68).

**Step 1** Right-click on the *Price History* plot and choose *Add Child Indicator* from the drop-down menu.



**Step 2** Type 'mov' and Choose *Moving Average* from the list.



Repeat the process for a second moving average.

**Step 3** Right-click the first *MovAvg* (either the indicator or the name in the legend) and choose *Edit* from the drop-down menu. Set the *Period* to 20 and the *Average Type* to *Simple*.

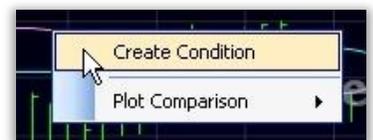


Repeat the process for the second moving average setting its period to 50.

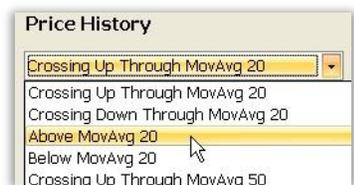
**Step 4** Left-click and drag the Price Plot to the 20-period moving average. Release the mouse button when the word *Compare* and an image of the indicator appear.



**Step 5** Choose *Create Condition* to open the *Edit Condition* window.



**Step 6** Choose *Above MovAvg 20* from the drop-down menu. Click *OK*.



Repeat the process for the 50 Bar Moving Average.

**Step 7** There are now two *Condition Bubbles* at the bottom left of the price pane on the chart.



**Step 8** Left-click and drag one *Condition Bubble* to the other, release the mouse button and choose *Create New Combination Condition*.



**Step 9** Name the combination condition *Above MovAvs*. Click *OK*. There is now one *Condition Bubble* on the chart.



**Step 10** Click on the combo *Condition Bubble* to sort the current WatchList by the new condition and paint the price bars whenever the condition is true.



**Step 11** Change the Time Frame of the chart to *Weekly* to see the conditions recalculate for the weekly moving averages.



## RESULTS

Every stock in the WatchList with *Sort Lights* passed the combined Conditions. They are grouped to the top of the WatchList and are currently above both the 20- and 50-day/week (depending on the time frame chosen) moving averages on the chart.

### Sort

Grouped below those with lights will be the stocks in the WatchList with the most recent occurrences of the condition (ascending in value from 1 bar since true).



### Paint bars

Finally, the price bars will be painted for the entire stock history every time the condition occurs.



## REMEMBER

The *Periods* and *Average Types* of the moving averages can be adjusted as desired. The Time Frame of the chart can be shorter (1 Day or 1 Minute) or longer (1 Month, etc) and the Conditions and *Sort Lights* will adjust to the changes. For stocks above one and not the other or below both, change either or both Conditions from *Above MovAvg X* to *Below MovAvg X*.

# 3. Adding a Comparison Symbol

## GOAL

To add a second price plot in the price pane of the Main Chart for comparison to the price history of the Active Symbol.

## CATEGORY

Price, Scaling, Overlaying Plots

## METHOD

To add a second price history, use the *Comparison* plot from the indicator library.

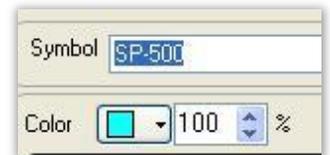
## STEPS

Here is a step-by-step guide for this exercise.

**Step 1** Use the shortcut quick search by typing */comp* and select *Comparison* from the list.



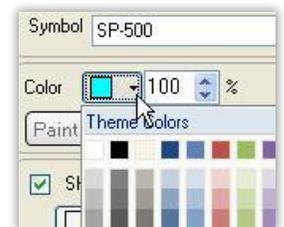
**Step 6** From the *Edit* window change the symbol from *DJ-30* to any other comparison symbol (like *SP-500* or *QQQ* or a stock symbol).



**Step 2** In the Add vs to Window, choose Price History from the drop-down. Click *OK*.



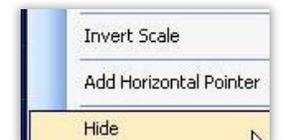
**Step 7** in the color section of the *Edit* window change the color or opacity of the comparison. Click *OK*.



**Step 3** This puts the plot on top of the existing price plot (for the Active Symbol).



**Step 8** To remove the extra scale now showing for the comparison, click on the scale and choose *Hide* from the menu.



**Step 4** Click the *Price History for DJ-30* plot (either the plot itself or the name in the legend) to open the *Edit* window. Change the plot style to *Line* (typical for a comparison symbol).



## RESULTS

There should now be a price plot (set for any desired symbol) as an overlay in the same pane as the price plot of the Active Symbol.

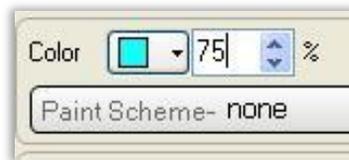


## REMEMBER

Display changes to make dual plots easier to distinguish:

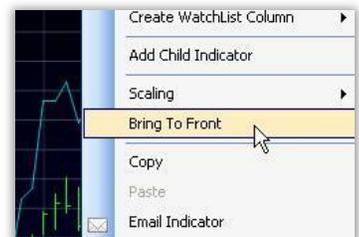
### Opacity

Right-click on the comparison symbol price plot and choose *Edit*. In the color section of the *Edit* window, lower the opacity of the plot (under its color section).



### Priority

Right-click the original (active symbol) Price History plot and choose *Bring to Front* to have it paint above the other plot.



## 4. ADX Values over Forty

### GOAL

Isolate stocks with an Average Directional Index (ADX) value greater than 40.

### CATEGORY

ADX, Sorting

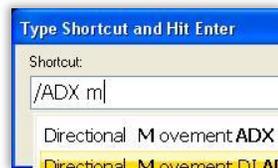
### METHOD

Create a Condition looking for ADX values greater than 40 then use it to sort a WatchList for stocks that pass the Condition—stocks in a strong up- or down-trend.

### STEPS

Here is a step-by-step guide for this exercise. For an alternative method to the steps in this lesson, refer to the RealCode Reference 2nd Edition (pp. 63-68).

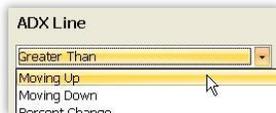
**Step 1** Type `/ADX m` on the chart to open the *Shortcut* window. Select *Directional Movement (DI ADX)* from the list to add an *ADX Indicator* to the chart.



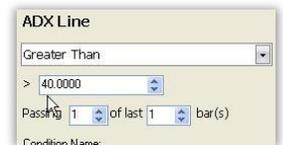
**Step 2** Right-click the yellow ADX plot and choose *Create Condition*.



**Step 3** In the Edit Condition window, select *Greater Than Value* from the drop-down menu.



**Step 4** Set the *Greater than Value* to 40. Click *OK*.



**Step 5** There is now a *Condition Bubble* at the lower left of the Price Pane.



**Step 6** Click on the *Condition Bubble* to sort the current WatchList by the new condition and paint the price bars whenever the condition is true.



## RESULTS

If there are any symbols in the WatchList with an ADX value at or greater than 40 they will group to the top of the WatchList with a *Sort Light* of the same color as the Condition.



### Sort

Grouped below those with lights will be the stocks in the WatchList with the most recent occurrences of the condition (ascending in value from 1 bar since true).



### Paint bars

Finally, the price bars will be painted for the entire stock history every time the condition occurs.

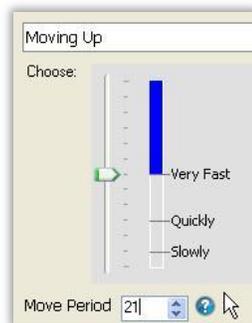


## REMEMBER

The Greater Than Value can be set to any number.

### Rising ADX

Right-click on the ADX Plot, choose *Create Condition*, set the condition drop-down to *Moving Up*, move the slider to *Very Fast* and set the *Move Period* to 21 to find stocks with a strengthening trend over the last month.



### Consolidation

Instead of using *Greater Than Value*, use *Less Than Value* and set its Value to 20 to sort for stocks with a low ADX value. Set the values *Passing X out of last X bars* to determine the length of consolidation.



# 5. Bollinger Band Breakout

## GOAL

To find stocks with prices breaking out of the Bollinger Bands.

## CATEGORY

Sort, Paint Price, Price, Volatility, Bollinger Bands, Breakout

## METHOD

If a stock has price bars bursting out of the top of the *Bollinger Bands* it could mean that an up-trending stock may be ready for a pullback or reversal. (Conversely, if a stock has price bars bursting out of the bottom of the Bollinger Bands it could mean that a down trending stock may be ready for a reversal move up.) By creating a Condition for the breakout and sorting by it, these stocks are brought to the top of any WatchList.

## STEPS

Here is a step-by-step guide for this exercise.

**Step 1** Press the (/) key and type "bb" then press enter.



**Step 2** In the *Add Bollinger Bands* to dialog box, double click on *Price History* to add the bands.



**Step 3** Left-click and drag the *Price History Plot* to the top *Bollinger Band* (the word *Compare* and an image of the indicator will appear).



**Step 4** Release the mouse button and choose *Create Condition*.



**Step 5** Choose *Above Bollinger Band Period 20, StdDev 2 TOP* from the drop-down menu.



**Step 6** Set value slider to *A Little Above*. Click *OK*.



**Step 7** There is now a *Condition Bubble* at the lower left of the Price Pane.



**Step 8** Click on the *Condition Bubble* to sort the current WatchList by the new condition and paint the price bars whenever the condition is true.



## RESULTS

Any stocks in the WatchList with price above the Bollinger Bands have a *Sort Light* (while grouped to the top of the WatchList). Price bars above the top Bollinger Band have the color of the Condition.



### Sort

Grouped below those with lights will be the stocks in the WatchList with the most recent occurrences of the condition (ascending in value from 1 bar since true).



### Paint bars

Finally, the price bars will be painted for the entire stock history every time the condition occurs.



## REMEMBER

Here are some alternative ways to use these conditions.

### Bottom Breakout

Use the same steps to find a bottom breakout, except in step 5 choose *Below Bollinger Band Period 20, StdDev2 Bottom* and in step 6, set value slider to *A Little Below*.

### Create Condition

An alternate method for comparing Price with the *Bollinger Band* is to right-click on the price bars choose *Create Condition* and choose the appropriate Bollinger band condition in the dialog window that appears.

## 6. Bouncing off the Bottom Band

### GOAL

To find down trending stocks with prices bouncing up off the Bollinger Bands.

### CATEGORY

Sort, Paint Price, Volatility, Bollinger Bands, Reversal, Sequence Condition

### METHOD

If a stock in a down-trend has price bars bouncing off the bottom of the bands it could mean that a reversal is beginning. By creating a *Sequence Condition* this combination of conditions is easy to uncover.

### STEPS

Here is a step-by-step guide for this exercise.

**Step 1** Press the (/) key and type "bb" then press enter.



**Step 2** In the *Add Bollinger Bands* dialog box, double click on *Price History* to add the bands.



**Step 3** Left-click and drag the *Price History Plot* to the top *Bollinger Band* (the word *Compare* and an image of the indicator will appear).



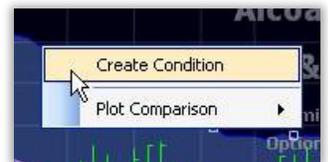
**Step 4** Choose *Create Condition*.



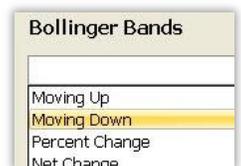
**Step 5** Choose *Crossing up through Bollinger Band Period 20, StdDev 2 BOTTOM* from the drop-down menu. Click *OK*.



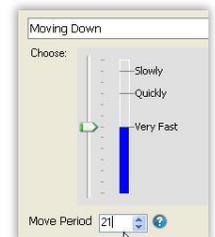
**Step 6** Right-click on the *Bollinger Band* plot and choose *Create Condition*.



**Step 7** Choose *Moving Down* from the drop-down menu.



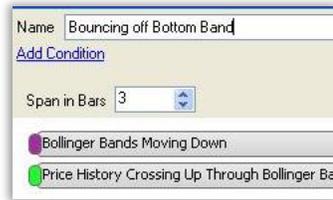
**Step 8** Set value slider to *Very Fast* and set the *Period* to 21. Click *OK*.



**Step 9** There are now two *Condition Bubbles* at the bottom left of the price chart. Left-click and drag the *Moving Down* bubble to the *Crossing up through Bollinger Band* bubble and choose *Create New Sequence*.



**Step 10** Set the *Span in Bars* field to 3. Name the sequence condition *Bouncing off Bottom Bollinger Band*. Click *OK*.



**Step 11** There is now one *Condition Bubble* on the chart.



**Step 12** Click on the *Sequence Condition Bubble* to sort the current WatchList by the new condition and paint the price bars whenever the condition is true.

## RESULTS

Any stocks in the WatchList with down trending price bars that have broken down through the bottom band and crossed back up have a *Sort Light* while grouping the stocks together at the top of the WatchList.



### Sort

Grouped below those with lights will be the stocks in the WatchList with the most recent occurrences of the condition (ascending in value from 1 bar since true).



### Paint bars

Finally, the price bars will be painted for the entire stock history every time the condition occurs.



## REMEMBER

Sequences are both flexible and customizable.

### Span in Bars

By increasing the *Span in Bars* setting in the *Sequence Condition*, more time is allotted for the two Conditions to be completed which can lead to more stocks passing the Condition.

### Update

Changing the settings for the *Bollinger Bands* will automatically update the Conditions and the sort.

# 7. Charts with Different Time Frames

## GOAL

To incorporate charts representing multiple time-frames into a single Layout.

## CATEGORY

Adding Charts, Time Frames

## METHOD

Add multiple charts to the active Layout; assign visual real estate to those charts; adjust time-frames for each chart at will.

## STEPS

Here is a step-by-step guide for this exercise.

**Step 1** Within the active Layout, click on *New Tab* at the top of the chart to tab a new chart into the Layout.

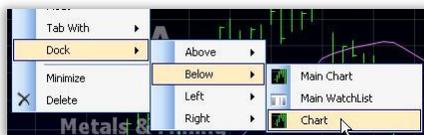


**Step 2** Right-click the new Chart tab's title bar. Select *Dock*, then *Right*, then *Main Chart* from the sub-menu. The newly added Chart now shares horizontal space with the *Main Chart*.



**Step 3** Click on *New Tab* at the top of the chart again to tab another new chart into the Layout.

**Step 4** Right-click Chart.2's title bar. Select *Dock*, then *Below*, then *Chart*.



**Step 5** Use the time-frame selector of each chart to determine the granularity of data plotted on each chart (e.g. Daily, 3-day, Weekly, Hourly, etc.).



**Step 6** Add any desired indicators to the additional charts using the Add Indicator icon (+) or (/) shortcut.



**Step 7** To make the new charts different symbols, jump to the desired symbol (by typing the symbol and pressing the enter key) and click the *Lock Icon* at the top left of the desired chart. This locks the symbol for that chart. Repeat for the third chart.



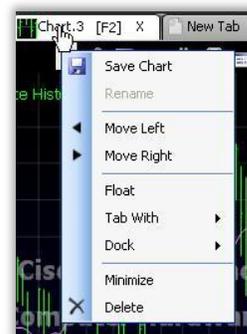
## RESULTS

Work with as many charts in as many time-frames as needed. In this exercise access to three charts in three independent time-frames on three distinct symbols is created.



## REMEMBER

*Docking (vs. tabbing)* can make charts simultaneously visible and removes the assigned Function [Fx] key for the docked chart. Right-click on the tab at the top of the chart for docking, tabbing and renaming options.



## Hot Keys

Each time a chart is added to a Layout, it is automatically added as a tabbed item, which receives an [Fx] key as a hotkey. As an alternative to using the mouse to select charts press the appropriate Function [Fx] key on the keyboard to view the associated chart.

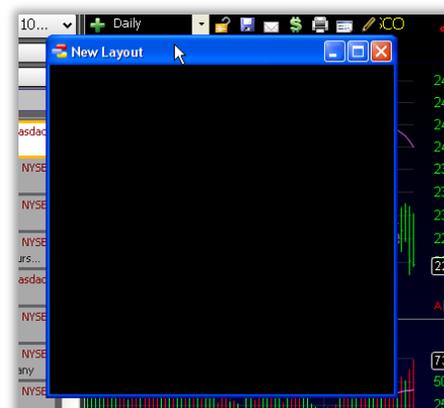


## Multiple Monitors

To add charts to a separate monitor, click on the *Windows* menu, choose *Add New Frame*.



Drag the frame to the desired monitor and then drag charts into that frame.



## 8. Creating a TRIX Histogram

### GOAL

To create a TRIX Histogram which, like a MACD Histogram, compares where the TRIX Indicator is relative to its own Moving Average (trigger line).

### CATEGORY

TRIX, Moving Average, Compare Plots, Scaling, Plot Style

### METHOD

Use the TRIX indicator and its Moving Average—found in the Indicator Library—to create a secondary oscillator.

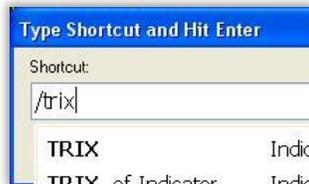
### STEPS

Here is a step-by-step guide for this exercise.

**Step 1** Click the *Add Indicator* icon.  As a shortcut, press the (/) key on the keyboard.



**Step 2** Type TRIX to limit the list of available indicators. Double-click the *TRIX* indicator to add the indicator to the active chart. This indicator is added to the chart within its own pane.



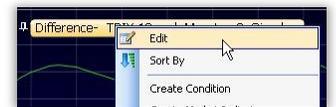
**Step 3** Left-click and drag the TRIX indicator onto its *Moving Average* (the word *Compare* and an image of the indicator will appear).



**Step 4** Select *Plot Comparison* from the menu that appears; then select *Difference*.



**Step 5** Right-click on the newly plotted *Difference Indicator* and choose *Edit* from the drop-down menu.



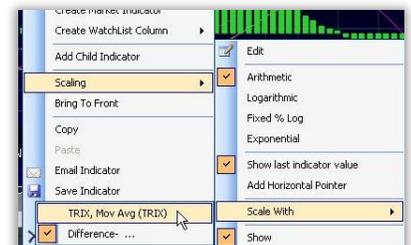
**Step 6** Within the *Edit* window, change the *Plot Style* from *Line* to *Bar* using the *Plot Style* drop-down. Click *OK*.



**Step 7** Left-click and drag the *Difference* plot (TRIX Histogram) into the original TRIX indicator pane until the tooltip reading *Overlay or Move pane* appears. Select *Overlay*.



**Step 8** Right-click the TRIX Histogram; then select *Scale With*; then select *TRIX*.



## RESULTS

Both the TRIX Indicator and the TRIX Histogram share the same pane and scale. When the TRIX Histogram reverses while its value is below zero, the TRIX Indicator has turned toward its own Moving Average.



## REMEMBER

The TRIX Indicator is a percent rate of change of a triple exponentially smoothed moving average.

### Histogram value

Movements toward its own Moving Average while below zero can be an important behavior. Creating a TRIX Histogram allows easy visual identification of TRIX movement toward its trigger line.



# 9. Compare Multiple MACD Histograms

## GOAL

To visually compare the behavior of multiple MACD Histograms with varying parameters in the same pane.

## CATEGORY

MACD Histogram, Overlaying Plots, Scaling, Color Opacity

## METHOD

Add three individual MACD Histogram plots to a chart; adjust their settings including periods and color schemes; overlay the plots within one pane.

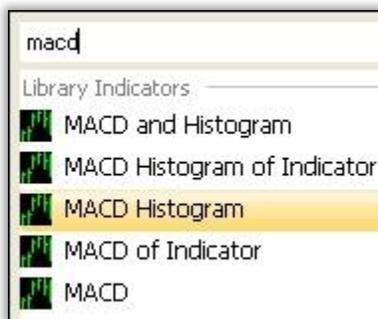
## STEPS

Here is a step-by-step guide for this exercise.

**Step 1** Click the *Add Indicator* icon.  As a shortcut, press the (/) key on the keyboard.

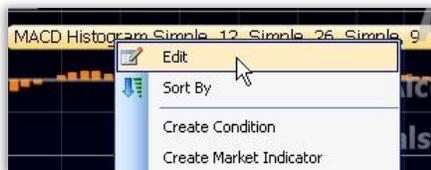


**Step 2** Type *MACD Histogram* to limit the list of available indicators. Double-click the *MACD Histogram* indicator to add the indicator to the active chart.



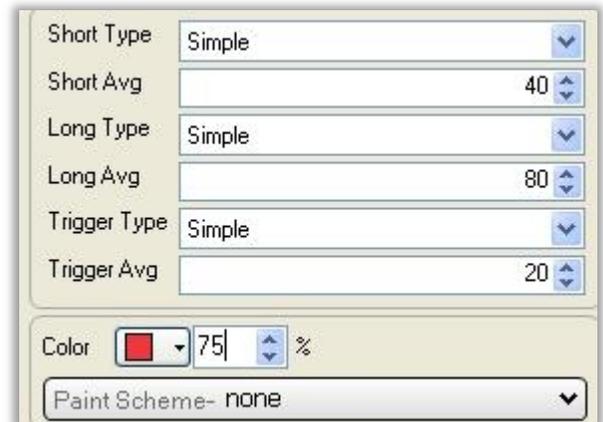
**Step 3** Repeat steps 1 and 2 twice more. There should be a total of three MACD Histograms—each within its own pane—included in the active chart.

**Step 4** Right-click the MACD Histogram legend label of the first MACD Histogram to open the *Edit MACD Histogram* window.



**Step 5** Within the *Main* tab, change the *Short Avg* to 40, the *Long Avg* to 80, and the *Trigger Avg* to 20.

**Step 6** Within the *Colors* section, change the Color to Red (or other desired color), and change the *Opacity* percentile to 75%. Click *OK*.

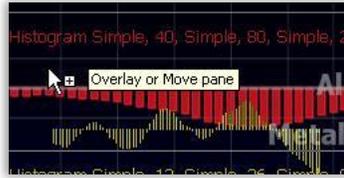


**Step 7** Repeat the process for the remaining two MACD Histograms using the following settings:

**-MACD Histogram 2:** change the *Short Avg* to 20, the *Long Avg* to 40, and the *Trigger Avg* to 10. Within the *Colors* section, change the Color to Yellow and the *Opacity* percentile to 75%. Click *OK*.

**-MACD Histogram 3:** change the *Short Avg* to 10, the *Long Avg* to 20, and the *Trigger Avg* to 5. Within the *Colors* section, change the Color to Cyan and the *Opacity* percentile to 75%. Click *OK*.

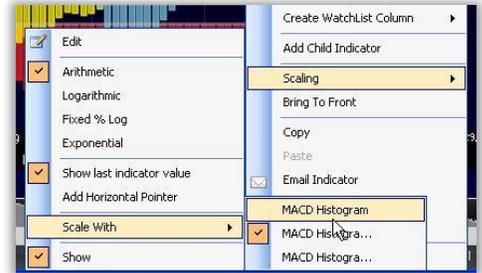
**Step 8** Left-click and drag the third MACD Histogram indicator into the same pane as the top MACD Histogram. When the tooltip reading *Move or Overlay* is visible, release the mouse button and choose *Overlay*. These two indicators should both now reside within the same pane.



**Step 9** Do the same step with the remaining MACD so that all three are in the same pane.

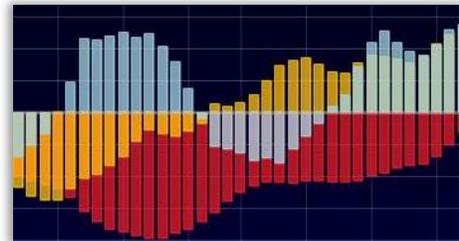
**Step 10** Right-click the second MACD Histogram and select *Scaling*; then select *Scale With*; then select MACD Histogram from the sub-menu.

Repeat for the third MACD Histogram. All of the MACD Histograms should share the same scale.



## RESULTS

Three unique MACD Histogram indicators share the same pane and can be visually analyzed and can be used as the basis of behavioral sorts.



## REMEMBER

Adjust period, average type, color, and opacity settings to desired charting needs and trading style.

## 10. Price Down Ten Percent in a Month

### GOAL

To isolate stocks which have moved down ten or more percent over the last 21 trading days.

### CATEGORY

Price, Sort

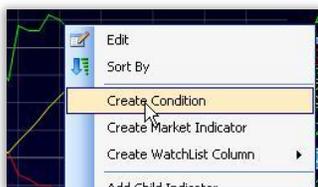
### METHOD

Create a Condition for down moves of -10% or worse and then sort by that Condition.

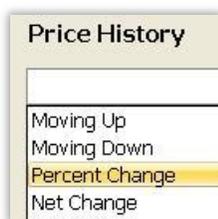
### STEPS

Here is a step-by-step guide for this exercise. For an alternative method to the steps in this lesson, refer to the RealCode Reference 2nd Edition (pp. 63-68).

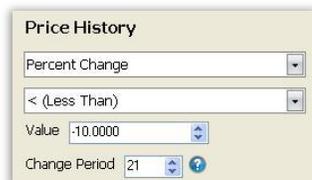
**Step 1** Right-click on the *Price History* and choose *Create Condition* opening the *Add Condition* window.



**Step 2** Choose *Percent Change* from the menu.



**Step 3** Choose *Less Than* from the drop-down menu, set the *Value* to -10 and the *Change Period* to 21. Click *OK*.



**Step 4** This places a single *Condition Bubble* on the bottom left of the Price Pane.



**Step 5** Click on the *Condition Bubble* to sort the current WatchList by the new condition and paint the price bars whenever the condition is true.



## RESULTS

Every stock in the WatchList that has moved down -10% or worse over the last 21 trading days is grouped to the top of the list with a *Sort Light* matching the color of the Condition created.



### Sort

Grouped below those with lights will be the stocks in the WatchList with the most recent occurrences of the condition (ascending in value from 1 bar since true).



### Paint bars

Finally, the price bars will be painted for the entire stock history every time the condition occurs.



## REMEMBER

All the variables used to create the Condition can be changed.

### Move Direction

*Percent Change* can look for stocks that moved up a certain percentage or better over the period. The *Value* setting can be changed to any number.

### Move Time Frame

The Condition is based on the time frame of the chart. If changed from *21 Day* to *5 Day*, it looks for the change to occur based on a period of a week instead of month.



# 11. Falling P/E Ratio

## GOAL

To identify stocks with earnings out performing price by finding stocks with a falling P/E ratio.

## CATEGORY

Price, Sorting, Fundamentals, P/E Ratio

## METHOD

If a stock's P/E ratio is moving down over a period of time it means the stock's earnings has out-performed its price over that period. Creating and sorting for a Condition for falling P/E lights up these stocks.

## STEPS

Here is a step-by-step guide for this exercise. (Note: StockFinder Platinum is required for this exercise.)

**Step 1** Change the time frame of the chart to *Weekly*.



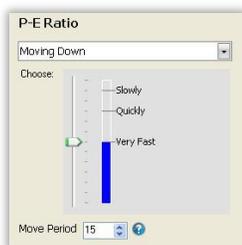
**Step 2** Add a *P/E Ratio* plot by typing */ratio* and clicking the *P-E Ratio* from the filtered list.



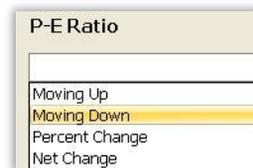
**Step 3** Right-click the *P/E Ratio* and click *Create Condition* link. Change the color as desired.



**Step 4** Choose *Moving Down* from the drop-down menu.



**Step 5** Choose *Very Fast* with the value slider and change the *Move Period* to 26 (in this case, it will be 26 weeks on the weekly chart).



**Step 6** This places a single *Condition Bubble* on the bottom left of the Price Pane.



**Step 7** Click on the *Condition Bubble* to sort the current WatchList by the new condition and paint the price bars whenever the condition is true.



## RESULTS

Any stocks in the WatchList passing the Condition will be grouped to the top with a *Sort Light* under it matching the Condition's color. Each of them has a *P/E Ratio* that is moving down over the last twenty-six (26) weeks. This means their earnings performed better than their price over the past twenty-six (26) weeks.



### Sort

Grouped below those with lights will be the stocks in the WatchList with the most recent occurrences of the condition (ascending in value from 1 bar since true).



### Paint bars

Finally, the price bars will be painted for the entire stock history every time the condition occurs.



## REMEMBER

Edit the Condition and set the *Move Period* to cover the desired number of weeks. Qualify the move down by moving the slider to a different value.

## 12. Filter Out Low Volume Stocks

### GOAL

To filter out stocks in a WatchList that trade on average less than 200,000 shares each day.

### CATEGORY

Volume, Filter, Moving Average

### METHOD

Create a Condition based on a moving average of volume. The Condition requires that the value of the volume moving average is greater than 200,000 shares. After making the Condition, use it as a filter for any WatchList.

### STEPS

Here is a step-by-step guide for this exercise. For an alternative method to the steps in this lesson, refer to the RealCode Reference 2nd Edition (pp. 63-68).

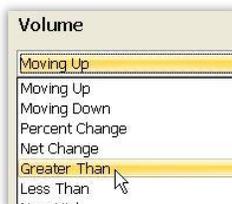
**Step 1** Choose the desired WatchList to filter from the WatchList drop-down.



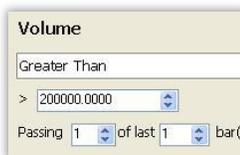
**Step 2** Right-click on the moving average of volume and choose *Create Condition*



**Step 3** Choose *Greater Than Value* from the drop-down menu.



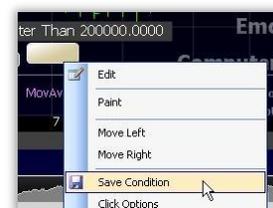
**Step 4** Set the *Greater Than Value* to 200,000.



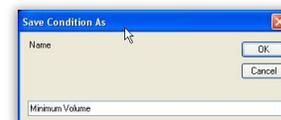
**Step 5** This places a single *Condition Bubble* on the bottom left of the Price Pane.



**Step 6** Right-click on the *Condition Bubble* and choose *Save*.



**Step 7** Name the Condition *Minimum Volume*. Click *OK* to save it to the Condition Library.



**Step 8** Click on the Filter drop-down menu and choose *Create New Filter*.



**Step 9** Name the Filter and click *Add Condition to Filter*



**Step 10** Type 'Min' to shorten the list and then choose the *Minimum Volume* condition from the drop-down list. Set the time frame to *Daily*. Click *Run Filter*.



## RESULTS

The Filter for the WatchList requires every stock in the list to have an average volume at or above 200,000 shares. Only the stocks that meet this Filter Condition are shown in the WatchList.

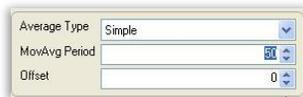


## REMEMBER

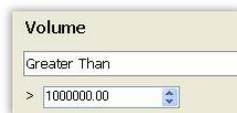
The number of days averaged is set by the period of the volume moving average used to create the Condition.

### Change Average Value

Click on the average to change its period. If the period is set to 50 then the Condition requires that the 50-bar average volume should be greater than 200,000.



The value of 200,000 can be changed. For stocks with an average volume over one million shares, set the value to 1,000,000 shares.



### Change Average Time Frame

The volume moving average uses the time frame of the chart it's on. If it is a daily chart, it is the daily average volume. If it's a weekly chart it shows the average weekly volume. The Condition value should be set based on the time frame of the chart (and the average).



## 13. Identifying News Surges

### GOAL

To isolate stocks which are being covered in the news with heavy and unusual interest.

### CATEGORY

Sort, News

### METHOD

Sort WatchList items by relative news volume using current values of the *NewsBuzz* Indicator.

### STEPS

Here is a step-by-step guide for this exercise. (Note: StockFinder Platinum is required for this exercise.)

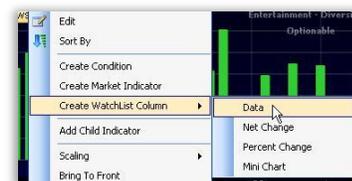
**Step 1** Click the *Add Indicator* button. Alternatively, press the (/) key on the keyboard.



**Step 2** Type *NewsBuzz* to limit the list of available indicators. Double-click the *NewsBuzz* indicator to add the indicator to the active chart. This indicator is added to the chart within its own pane.



**Step 3** Right-click the *NewsBuzz* and choose *Create WatchList Column*. Choose *Data*.



**Step 4** Click the *NewsBuzz* column header within the Main WatchList to sort items in the list in descending order. The stocks with the greatest relative news volumes are raised to the top of the list.



### RESULTS

Stocks with the greatest volume of news articles (relative to their own news history) are raised to the top of the list. The *NewsBuzz* indicator is also plotted historically on the chart.



### REMEMBER

View a list of all of the most recent news articles for any selected stock in the WatchList. Click the *Research* menu, select *Stock News*. A list of recent news articles for the active symbol is displayed below the main WatchList.



This page intentionally blank.

# 14. Increasing Buy Ratings

## GOAL

To isolate stocks with an increase in their Zacks Analyst Buy Ratings.

## CATEGORY

Analyst Rating, Sort

## METHOD

Create a Condition for the % *BUY Ratings* indicator moving up over the last 21 trading days then sorting by the Condition.

## STEPS

Here is a step-by-step guide for this exercise. (Note: StockFinder Platinum is required for this exercise.)

**Step 1** While looking at a chart type */buy r* and choose the *Percent BUY Ratings* indicator from the list adding the indicator to the chart.



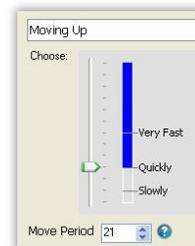
**Step 2** Right-click the *Percent BUY Ratings* indicator and choose *Create Condition*.



**Step 3** Choose *Moving Up* from the drop-down menu.



**Step 4** Change the *Move Period* (under the slider) to 21. Click *OK*.



**Step 5** This places a single *Condition Bubble* on the bottom left of the Price Pane.



**Step 6** Click on the *Condition Bubble* to sort the current WatchList by the new condition and paint the price bars whenever the condition is true.



## RESULTS

Every stock in the WatchList grouped to the top with a *Sort Light* matching the color of the created CONDITION has their buy ratings moving up quickly over the last 21 bars (days on a 1 Day chart). The *Percent BUY Ratings* plot shows the percentage of analysts rating the stock a “BUY”. The stocks found in this sort are experiencing an increase in the percentage of analysts that are rating it a “BUY” or a “STRONG BUY”.



### Sort

Grouped below those with lights will be the stocks in the WatchList with the most recent occurrences of the condition (ascending in value from 1 bar since true).



### Paint bars

Finally, the price bars will be painted for the entire stock history every time the condition occurs.

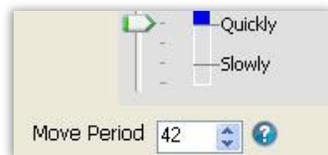


## REMEMBER

There are many ways to use the Zacks Data.

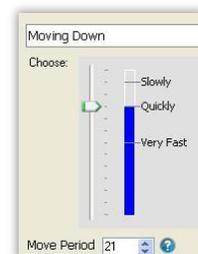
### Change Move Period

The *Move Period* sets over what time the indicator has to move. This can be increased or decreased to find longer or shorter term increases in the *Percent BUY Ratings*.



### Related Studies

Instead of looking for the ratings increasing, change *Moving Up* in the Condition to *Moving Down*. In the indicator library there are also indicators for the *Average Analyst Ratings* and the *Percent SELL Ratings*.



# 15. MACD Histogram Turning Positive

## GOAL

To sort for stocks where the MACD Histogram indicator crosses from negative to positive value.

## CATEGORY

MACD Histogram, Sorting

## METHOD

The MACD Histogram indicator can be negative (below zero) or positive (above zero). Creating a Condition for the MACD Histogram crossing up through the value of zero allows sorting for stocks that were below zero but are above zero on the current bar.

## STEPS

Here is a step-by-step guide for this exercise. For an alternative method to the steps in this lesson, refer to the RealCode Reference 2nd Edition (pp. 63-68).

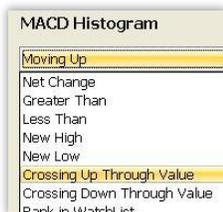
**Step 1** Add the MACD Histogram indicator by typing `/macd h` and choosing *MACD Histogram* from the filtered list.



**Step 2** Right-click the MACD Histogram indicator and choose *Create Condition*.



**Step 3** Choose *Crossing Up Through Value* from the drop-down menu.



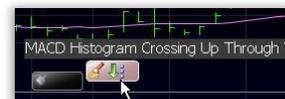
**Step 4** Set the *Crossing Up Value* to 0.00. Click *OK*.



**Step 5** This places a single *Condition Bubble* on the bottom left of the Price Pane.



**Step 6** Click on the *Condition Bubble* to sort the current WatchList by the new condition and paint the price bars whenever the condition is true.



## RESULTS

Each stock in the WatchList with a MACD histogram crossing up through the center zero line will be grouped to the top with a *Sort Light* in the Condition's color.



### Sort

Grouped below those with lights will be the stocks in the WatchList with the most recent occurrences of the condition (ascending in value from 1 bar since true).



### Paint bars

Finally, the price bars will be painted for the entire stock history every time the condition occurs.

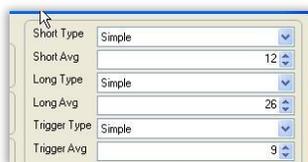


## REMEMBER

The criteria of the Conditions can be adjusted to fit other desired results.

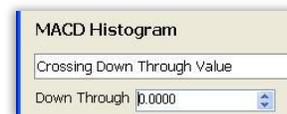
### Change Settings

Edit the MACD Histogram to change the settings and the Condition and *Sort Lights* will automatically update to reflect the changes.



### Change Direction

Edit the Condition by right-clicking on the plot and choosing *Edit*. Change *Crossing Up Through Value* to *Crossing Down Through Value* to sort for stocks crossing into negative values.



## 16. Making or Challenging Highs in Price

### GOAL

To identify stocks making, at, or challenging their most recent new price highs.

### CATEGORY

Price, Sorting

### METHOD

By creating one Condition to find stocks challenging, making or breaking a previous high all the stocks meeting the Condition can be lit with *Sort Lights*.

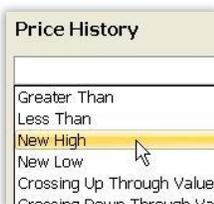
### STEPS

Here is a step-by-step guide for this exercise.

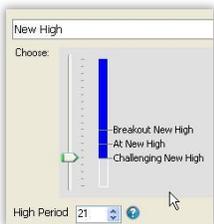
**Step 1** Right-click the *Price History* and click *Create Condition* link.



**Step 2** Choose *New High* from the drop-down menu.



**Step 3** Set the *High Period* to the desired previous high to challenge or break. Move the slider down to *Challenging New High*. Click *OK*.



**Step 4** This places a single *Condition Bubble* on the bottom left of the Price Pane.



**Step 5** Click on the *Condition Bubble* to sort the current WatchList by the new condition and paint the price bars whenever the condition is true.



## RESULTS

Any stocks in the WatchList passing the Condition will be grouped to the top with a *Sort Light* under it matching the Condition's color.



### Sort

Grouped below those with lights will be the stocks in the WatchList with the most recent occurrences of the condition (ascending in value from 1 bar since true).



### Paint bars

Finally, the price bars will be painted for the entire stock history every time the condition occurs.



## REMEMBER

Edit the Condition by right-clicking the Condition on the chart and choosing *Edit*. Change the period of the high or adjust the slider to only find stocks making or breaking the previous high.

# 17. Moving Averages Crossing

## GOAL

To identify stocks with two moving averages (of price) crossing.

## CATEGORY

Price, Moving Average, Lines Crossing

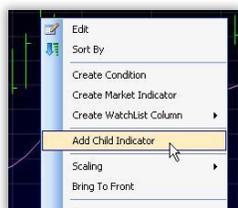
## METHOD

When two moving averages of price are plotted, sorting for how they compare to each other lights up all the stocks where they are crossing.

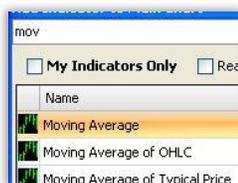
## STEPS

Here is a step-by-step guide for this exercise. For an alternative method to the steps in this lesson, refer to the RealCode Reference 2nd Edition (pp. 63-68).

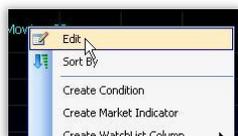
**Step 1** Add a moving average to the price pane by right-clicking the *Price History* plot and choosing *Add Child Indicator*.



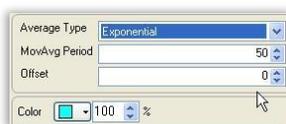
**Step 2** Type 'Mov' in the *Type to Search* box and select *Moving Average* from the filtered list.



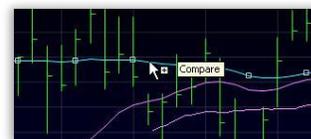
**Step 3** Right-click a moving average plot and choose *Edit*.



**Step 4** Set the moving average to the period, type and color desired (e.g. 50 bars, exponential). Click *OK*. Repeat the process for the second Moving Average.



**Step 5** Left-click and drag the shorter period moving average on the price chart to the longer period moving average (the word *Compare* and an image of the indicator will appear).



**Step 6** Release the mouse button and choose *Create Condition* on the drop-down menu.



**Step 7** Choose *Crossing Up Through MovAvgXX* where *XX* is the longer-period moving average. In the *Edit* box, set the Condition's color. Click *OK*.



**Step 8** This places a single *Condition Bubble* on the bottom left of the Price Pane.



**Step 9** Click on the *Condition Bubble* to sort the current WatchList by the new condition and paint the price bars whenever the condition is true.



## RESULTS

Any stocks in the WatchList that have the shorter moving average crossing up through the longer moving average have a light under their ticker and are grouped to the top of the WatchList.



### Sort

Grouped below those with lights will be the stocks in the WatchList with the most recent occurrences of the condition (ascending in value from 1 bar since true).



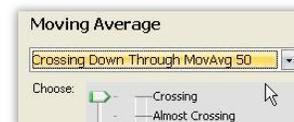
### Paint bars

Finally, the price bars will be painted for the entire stock history every time the condition occurs.



## REMEMBER

To find the short- crossing down through the long-term moving average, use *Crossing Down Through* instead of *Crossing Up Through*.



### Price Crossing an Average

To find price crossing a Moving Average, instead of dragging one moving average to the other, left-click and drag the Price plot to the Moving Average plot, choose *Create Condition* and follow the steps above from there.

# 18. Oversold Stochastics

## GOAL

To identify stocks with a Stochastics value below twenty.

## CATEGORY

Stochastics, Sorting, Oversold, True in a Row

## METHOD

Sort the WatchList by how many bars in a row a stock has registered a Stochastics value below twenty.

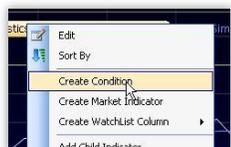
## STEPS

Here is a step-by-step guide for this exercise.

**Step 1** Add *Stochastics* to the chart by typing */Stoch* and selecting it from the filtered list.



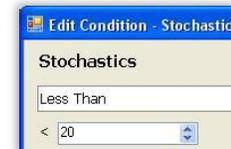
**Step 2** Right-click the white Stochastics plot. And choose *Create Condition* from the drop-down menu.



**Step 3** Choose *Less Than Value* from the drop-down menu.



**Step 4** Set the *Less than Value* to 20. Click *OK*.



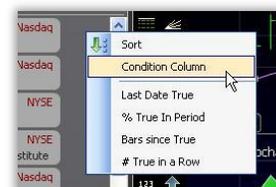
**Step 5** This places a single *Condition Bubble* on the bottom left of the Price Pane.



**Step 6** Left-click and drag the Condition to the main WatchList (*Add as Column* appears).



**Step 7** Release the mouse button and choose *Condition Column* from the menu that appears.



**Step 8** Click on the *Condition Column* header in the WatchList to sort the list.



## RESULTS

Any stocks in the WatchList are sorted by those most recently experiencing a Stochastics value below twenty.

Also involved in the sort are how many bars in a row the stock has been experiencing a Stochastics value below twenty.

Finally, stocks which have most recently experienced moving out of that condition appear.

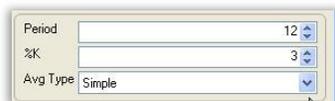


## REMEMBER

Other ways to use Stochastics plot are available.

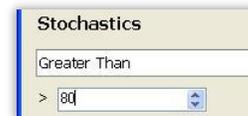
### Change Settings

Edit the Stochastics plot to change any of the settings and the Condition will be automatically updated.



### Above Overbought Line

Edit the created Condition on the chart (right-click on it and choose *Edit*) and choose *Greater Than* and set the value to 80 (to find stocks showing an Overbought Stochastics value on the most recent bar). Click *OK*.



# 19. Paint Down Sloping Price

## GOAL

To paint the Price plot green when sloping up and red when sloping down.

## CATEGORY

Price, Paint Price, Linear Regression Slope

## METHOD

By default price is already painted green. By creating a Condition based on a *Linear Regression Slope* indicator registering values below zero, price can then be colored by that Condition.

## STEPS

Here is a step-by-step guide for this exercise.

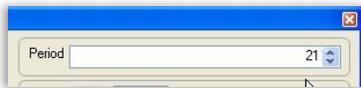
**Step 1** Press the (/) key on the keyboard to open the Quick Search box. Type “slope” to filter the list. Click *Linear Regression Slope* (not of indicator) on the list to add the indicator to the chart.



**Step 2** Right-click the *Linear Regression Slope* indicator and click *Edit* which opens the *Edit Linear Regression Slope* window.



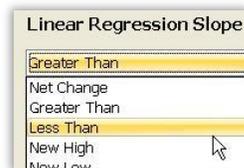
**Step 3** Set the period to measure the slope in the *Period* setting on the right to 21. Click *OK*.



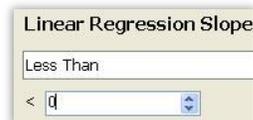
**Step 4** Right-click the *Linear Regression Slope* plot and choose *Create Condition*.



**Step 5** Choose *Less Than Value* from the drop-down menu.



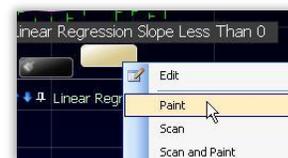
**Step 6** Change *Less Than Value* to 0 (zero) and change the color to red using the color selector. Click *OK*.



**Step 7** This places a single *Condition Bubble* on the bottom left of the Price Pane.



**Step 8** Right-click on the *Condition Bubble* and choose *Paint*



## RESULTS

When price has a negative slope over the period of the *Linear Regression Slope* Indicator it will pass the created Condition and color the bars red. All other bars are painted the native green color (the slope is zero or higher).



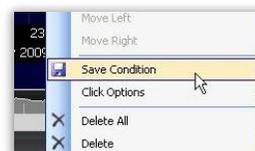
## REMEMBER

The period setting for the Linear Regression Slope indicator can be adjusted. If increased the period that the slope measures is increased and the color is automatically adjusted.

### Save Color Scheme

Saving the color scheme is simple.

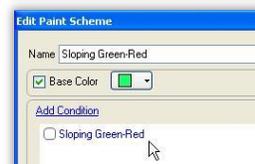
First, right-click on the *Condition Bubble* and choose *Save Condition*. Name it (Sloping Green-Red). Click Save.



Click the *Paint Scheme* icon and choose *New Paint Scheme*.



Type in 'Sloping' and then click on the condition. That paint scheme is now applied to the current chart.



## 20. Paint Price by the Close in the Range

### GOAL

To paint price bars yellow if they close in the top half of the trading range and red if they close in the bottom half of the trading range.

### CATEGORY

Price, Paint Price, RealCode

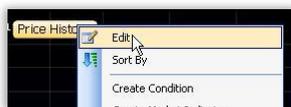
### METHOD

If the distance from the high of the bar to the close of the bar is less than the distance from the close of the bar to the low of the bar, the stock closed in the top half of its trading range. Creating a simple *RealCode* Paint Brush will paint stocks based on where they close in the range.

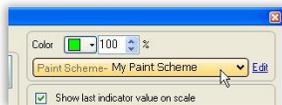
### STEPS

Here is a step-by-step guide for this exercise.

**Step 1** Right-click on the *Price History* plot and choose *Edit*.



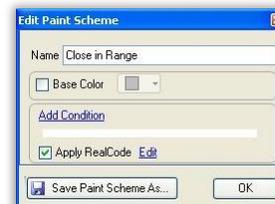
**Step 2** In the *Colors* section of the *Edit* window, click on the color drop-down.



**Step 3** Choose the *New Paint Scheme* option.



**Step 4** Name the new paint scheme *Close in Range* and put a check in the tick box next to *Apply RealCode*. Click *OK*.



**Step 5** In the *RealCode* window that opens replace the '**PlotColor = Color.Gray**' code with the following code (then click *Apply* and *OK*).



## RESULTS

---

Every price bar will color either yellow or red. If it colors yellow it means the close is closer to the high than the low otherwise it colors red.

## REMEMBER

---

Edit the Price History plot, go to its Color tab and edit the Paint Brush at any time. Change the colors in the code by changing yellow to green or red to blue (or anything else).

# 21. Price Between \$10 and \$50

## GOAL

To filter any WatchList down to just the stocks priced between \$10 and \$50 per share.

## CATEGORY

Price, Filter

## METHOD

Create two Conditions based on the *Price History* plot—one Condition for price greater than the value 10 and one for the price less than the value 50. Combine the Conditions and use them in a filter.

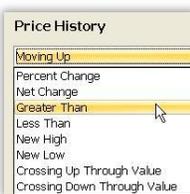
## STEPS

Here is a step-by-step guide for this exercise. For an alternative method to the steps in this lesson, refer to the RealCode Reference 2nd Edition (pp. 63-68).

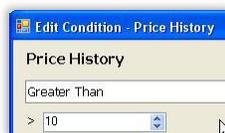
**Step 1** Right-click on the *Price History* plot and choose *Create Condition*.



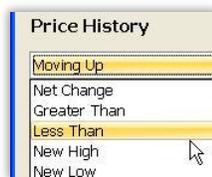
**Step 2** Choose *Greater Than Value* from the drop-down menu.



**Step 3** Set the *Greater Than Value* to 10. Click *OK*.



**Step 4** Right-click on the *Price History* plot and choose *Create Condition*. Choose *Less Than Value* from the drop-down menu.



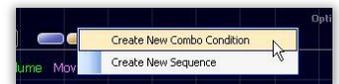
**Step 5** Set the *Less Than Value* to 50. Click *OK*.



**Step 6** This places two *Condition Bubbles* at the lower left of the Price Pane.



**Step 7** Drag one *Condition Bubble* to the other and choose *Create Combination Condition*.



**Step 8** This leaves one *Condition Bubble* at the lower left of the Price Pane.



**Step 9** Right-click on the *Condition Bubble* and choose *Save*.



**Step 10** Name the Condition *Price Range*. Click *OK* to save it to the Condition Library.



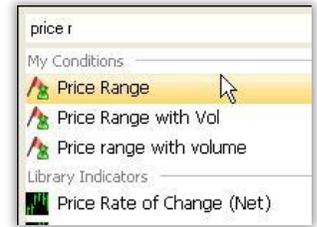
**Step 11** Click on the Filter drop-down menu and choose *Create New Filter*.



**Step 12** Name the Filter and click *Add Condition to Filter*.



**Step 13** Type 'Price R' to shorten the list and then choose the *Price Range* condition from the drop-down list. Set the time frame to *Daily*. Click *Run Filter*



## RESULTS

Any WatchList chosen with the WatchList selector will now show only the stocks in the WatchList that trade between \$10 and \$50 per share.

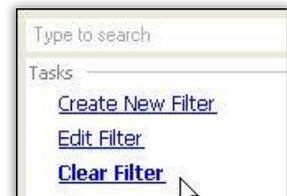


## REMEMBER

The \$10 and \$50 numbers can be set to any value. Also, two Conditions are not required. To filter for only stocks above a value or below a value, use just one Condition.

### Clear Filter

The Conditions used in the filter can be turned off by clicking the down arrow to the right of the Filter and choosing *Clear Filter*.



## 22. Price Moving Up Several Days in a Row

### GOAL

To identify stocks which have moved up in price several bars consecutively.

### CATEGORY

Price, Sorting, True in a Row, Paint Price

### METHOD

By creating and sorting one Condition for a stock moving up over a period of days, stocks with consistent price movement can be easily identified.

### STEPS

Here is a step-by-step guide for this exercise.

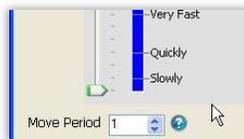
**Step 1** Right-click the *Price History* and choose *Create Condition* from the drop-down menu.



**Step 2** Choose *Moving Up* as the condition in the drop-down.



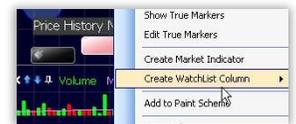
**Step 3** Move the slider to the bottom (below *Slowly*) to catch all up values for the condition and set the *Move Period* to 1. Click *OK*.



**Step 4** This leaves a single *Condition Bubble* on the price pane.



**Step 5** Right-click the *Condition Bubble* and choose *Create WatchList Column*.



**Step 6** Choose *True in a Row* from the drop-down menu.



**Step 7** This places a column in the WatchList. Click on the header of the new column to sort in descending order (with the highest values at the top of the list).



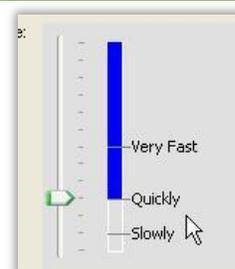
## RESULTS

When finished a new column will be to the right of all the symbols in the WatchList sorting the WatchList by the number of bars in a row the stock moved up. The value in the column represents the number of bars in a row it moved up.

3	<b>JACK</b>	Nasdaq	7
	Jack In The Box I...		
4	<b>DW</b>	NYSE	7
	Drew Industries I...		
5	<b>UIS</b>	NYSE	5
	Unisys Corp		
6	<b>TUES</b>	Nasdaq	5
	Tuesday Morning...		
7	<b>ACCL</b>	Nasdaq	5
	Accelrys Inc		
8	<b>MSL</b>	Amex	5
	Midsouth Bancorp		

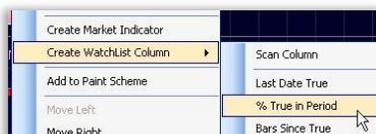
## REMEMBER

Edit the Condition to qualify the move by changing the slider to *Slowly* or *Quickly*.



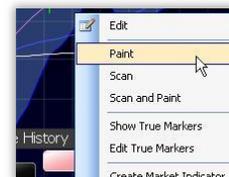
### Percent True in Row

Create another sort column with the exact same steps except choose *% True in Period* as the column condition. Sort the column in descending order and the stocks at the top of the list will have the greatest percentage of up moves over the last fifty bars.



### Paint When True

Right-click on the *Condition Bubble* and choose Paint from the drop-down menu.



This will paint the price bars whenever they meet the Condition.



## 23. Price Pulling Back after an Uptrend

### GOAL

To identify stocks whose price moved up then pulled back.

### CATEGORY

Price, Sorting, Sequence Condition

### METHOD

*Sequence Conditions* find stocks meeting multiple Conditions (in order) over a period of time. Create a Condition for price moving up then for price moving down, combine them into a Sequence Condition and sort for stocks passing the Conditions in sequence.

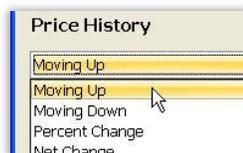
### STEPS

Here is a step-by-step guide for this exercise.

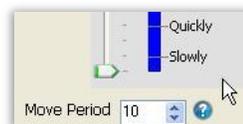
**Step 1** Right-click the *Price History* and choose *Create Condition* from the drop-down menu.



**Step 2** Choose *Moving Up* as the condition in the drop-down.



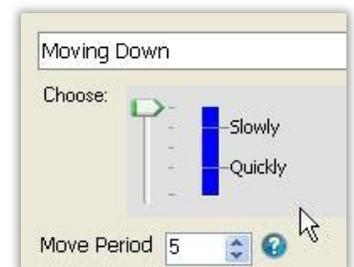
**Step 3** Set the number of bars desired for the uptrend. (For example setting it to 10 looks for a ten-bar uptrend in price.) Click *OK*.



**Step 4** Repeat step 1, then Choose *Moving Down* as the condition in the drop-down.



**Step 5** Set the *Move Period* to a value less than that set for the *Move Period* on the *Moving Up* Condition. (If the *Moving Up* Move Period to 10, set this Move Period to 5.)



**Step 6** This will leave two *Condition Bubbles* on the price pane of the chart.



**Step 7** Left-click and drag the *Moving Up* Condition to the *Moving Down* condition.



**Step 8** Release the mouse button and choose *Create New Sequence* from the drop-down menu.



**Step 9** Name the sequence *Pulling Back* and Set the *Span in Bars* to a number one greater than the period of the *Moving Down* Condition. (If the *Move Period* of the *Moving Down* Condition to 5, set the *Span in Bars* to 6.) Click *OK*.



**Step 10** This will leave one *Condition Bubble* on the price pane. Click the *Condition Bubble* to sort the current WatchList by the new condition and paint the price bars whenever the condition is true.



## RESULTS

Any stocks in the WatchList passing the Condition will be grouped to the top with a *Sort Light* under it matching the Condition's color. Each of them will have an uptrend followed by a pullback.



### Sort

Grouped below those with lights will be the stocks in the WatchList with the most recent occurrences of the condition (ascending in value from 1 bar since true).



### Paint bars

Finally, the price bars will be painted for the entire stock history every time the condition occurs.



## REMEMBER

Edit the *Sequence Condition* or the *Moving Up* or *Down Conditions* by right-clicking the Condition on the chart and choosing *Edit*. Change the period of the moving up/moving down conditions or the *Span in Bars*. (The *Span in Bars* should always be at least one more than the *Move Period* of the *Moving Down* Condition.)

## 24. Ranking by Average Trading Range

### GOAL

To rank a WatchList of stocks by the average trading range of each stock over the past fifty trading days.

### CATEGORY

Price, RealCode, Sorting, Moving Average

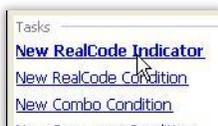
### METHOD

Create a *RealCode* indicator for trading range, apply a moving average to the indicator and then sort a WatchList by the value of that average.

### STEPS

Here is a step-by-step guide for this exercise.

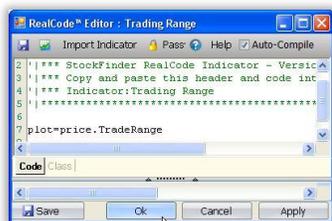
**Step 1** Click the *Add Indicator* icon  and select *New RealCode Indicator* from the menu.



**Step 2** Name the indicator *Trading Range*. Click *OK*.



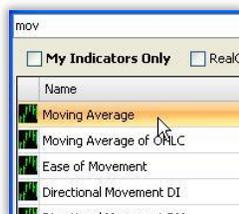
**Step 3** Enter the following code on line 5 in the *RealCode Editor*:  
**plot=price.TradeRange**  
Click *OK*.



**Step 4** Right-click the *Trading Range* indicator and choose *Add Child Indicator* from the drop-down menu.



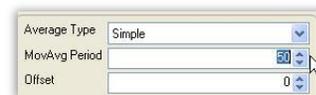
**Step 5** Type 'mov' in the *Type to search* field and choose *Moving Average* from the list. Click *OK*.



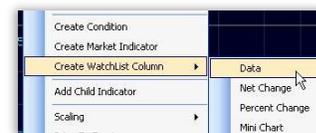
**Step 6** Right-click *MovAvg 30* and choose *Edit* from the drop-down menu.



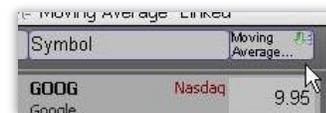
**Step 7** Change the *MovAvg Period* on the right from 30 to 50.



**Step 8** Right-click *MovAvg 30* and choose *Create WatchList Column* from the drop-down menu. Choose *Data*.



**Step 9** Click the *MovAvg50* column header to sort the WatchList by each symbol's 50-bar average trading range.



**Step 10** If the new WatchList column is not visible to the right of each symbol, expand the WatchList window.



## RESULTS

The WatchList is now ranked by the value of the moving average on the *RealCode* indicator Trading Range. The stocks with the highest average trading range appear at the top of the list.



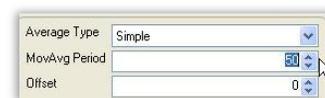
	Symbol	Moving Average	
1	GOOG Google	Nasdaq	9.95
2	MA MasterCard Inc	NYSE	5.47
3	AAPL Apple Inc	Nasdaq	4.94
4	GS Goldman Sachs Group Inc	NYSE	4.06

## REMEMBER

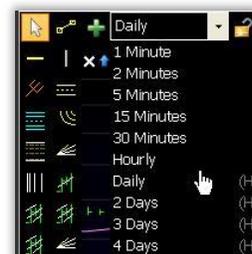
Knowing the stock's average trading range can be helpful for short-term trading, swing trading or option plays.

### Change Settings

Changing the period of the moving average on the *Trading Range* indicator changes the number of bars averaged for the sort column.



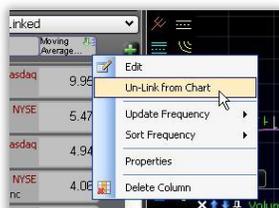
Changing the time frame of the chart changes the time frame for the indicator and the WatchList column. If the chart is set to *1 Day* then the column shows the average daily trading range. If the chart is set to *1 Week* then the column shows the average weekly trading range.



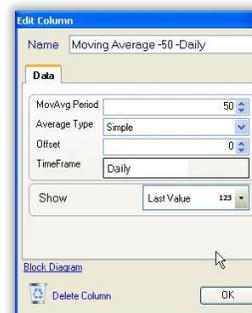
(Keep in mind that the stock's price per share greatly influences how large the daily or weekly trading range is.)

### Unlinking From Chart

Right-click on the column header to *Unlink From Chart* (disconnect) the column from the chart. The Indicator can now be removed from the chart without removing the column from the WatchList.



Right-click on the unlinked column header and choose *Edit* to change the parameters on which the column is based.



## 25. Price Staying Above a Moving Average

### GOAL

To isolate stocks with price above or below their moving average several days, weeks or months in a row.

### CATEGORY

Moving Average, Sorting, True in a Row, Price

### METHOD

Create a Condition for price above the moving average then sort by the number of bars in a row a stock passed the Condition.

### STEPS

Here is a step-by-step guide for this exercise. For an alternative method to the steps in this lesson, refer to the RealCode Reference 2nd Edition (pp. 63-68).

**Step 1** Type `/ma` on the chart and press the *Enter* key.



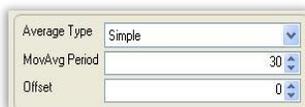
**Step 2** Choose *Price History* from the *Add Moving Average* to window. Click *OK*.



**Step 3** Right-click the newly added Moving Average plot and choose *Edit* from the drop-down menu.



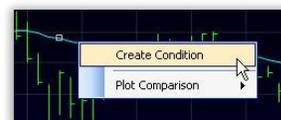
**Step 4** Set the *MovAvg Period* to the desired period for the moving average. Choose the *Average Type* (Simple, Exponential or Front Weighted). Click *OK*.



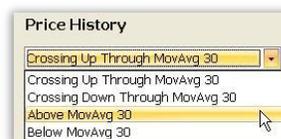
**Step 5** Left-click and drag the *Price History* plot to the *Moving Average* plot (the word *Compare* and an image of the indicator will appear).



**Step 6** Release the mouse button and choose *Create Condition* from the drop-down.



**Step 7** Choose *Above MovAvgX* (where *X* is the period of the moving average). Click *OK*.



**Step 8** This places a single *Condition Bubble* on the price pane of the chart.



**Step 9** Right-click the *Condition Bubble* and choose *Create WatchList Column*. Choose *#True in a Row*.



**Step 10** Click the *Above MovAvg50* column header to sort the WatchList.



**Step 11** If the new WatchList column is not visible to the right of each symbol, expand the WatchList window.



## RESULTS

Each stock in the WatchList is now ranked by the number of bars in a row each stock spent above its moving average. The larger the number, the more bars in a row price has spent above the average. The stocks at the top of the sorted WatchList have spent the most days in a row above their average.

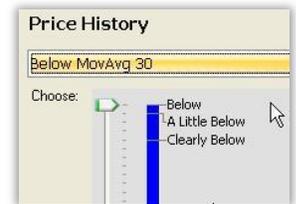


## REMEMBER

There are other ways to utilize this process.

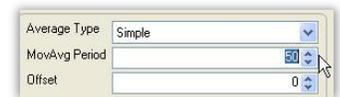
### Below Moving Average

Create a second Condition using the same steps above but instead of using *Above MovAvgX* use *Below MovAvgX*. Create a sort column for that Condition to rank stocks based on how many bars in a row they've spent below their average.



### Change Settings

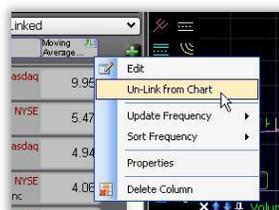
Changing the period of the moving average on the *Above MA* indicator changes the number of bars averaged for the sort column.



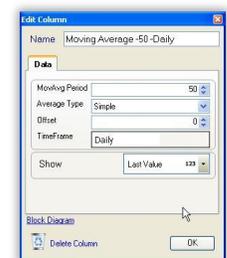
Changing the time frame of the chart changes the time frame for the indicator and the WatchList column. If the chart is set to *1 Day* then the column shows the average daily trading range. If the chart is set to *1 Week* then the column shows the average weekly trading range.

### Unlinking From Chart

Right-click on the column header to *Unlink From Chart* (disconnect) the column from the chart. The Indicator can now be removed from the chart without removing the column from the WatchList.



Right-click on the unlinked column header and choose *Edit* to change the parameters on which the column is based.



## 26. Stocks with Above Average Volume

### GOAL

To find stocks which currently are experiencing an unusually high volume of trading.

### CATEGORY

Sorting, Paint Price, Unusual Activity, Volume, Moving Average

### METHOD

By default, a new Layout contains Volume Bars on the *Main Chart*. In addition, the Volume plot has a 30-bar Moving Average on it. (Add volume bars to any chart by using the shortcut—type `/volume bars`.) If a particular volume bar has a higher value than its moving average (the bar is above the average line in the volume pane) that bar's volume is above average.

### STEPS

Here is a step-by-step guide for this exercise. For an alternative method to the steps in this lesson, refer to the *RealCode Reference 2nd Edition* (pp. 63-68).

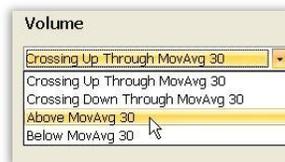
**Step 1** Left-click and drag the *Volume Bars* plot to the Moving Average plot in the Volume pane (the word *Compare* and an image of the indicator will appear).



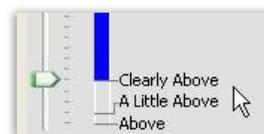
**Step 2** Release the mouse button and choose *Create Condition* from the drop-down menu.



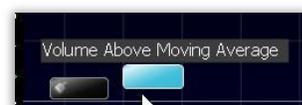
**Step 3** Choose *Above MovAvg 30* (if the average has a different period than 30 it will show that value instead) from the drop-down menu.



**Step 4** Move the slider to *Clearly Above*. Click *OK*.



**Step 5** This will leave one *Condition Bubble* on the price pane.



**Step 6** Click the *Condition Bubble* to sort the current WatchList by the new condition and paint the price bars whenever the condition is true.



## RESULTS

Any stocks in the WatchList with average volume clearly above its norm on the current bar should have a light under them and are grouped together at the top of the WatchList.

### Sort

Grouped below those with lights will be the stocks in the WatchList with the most recent occurrences of the condition (ascending in value from 1 bar since true).



### Paint bars

Finally, the price bars will be painted for the entire stock history every time the condition occurs.



## REMEMBER

Change the time frame of the chart and all the averages, sort lights, price painting, etc., will adjust. Change the period or average type of the volume moving average and all the elements will adjust as well.

## 27. Tightening Bollinger Bands

### GOAL

To find stocks with contracted volatility resulting in a *Bollinger Band* squeeze.

### CATEGORY

Sort, Paint Price, Volatility, Bollinger Bands

### METHOD

Create a Condition for the *Bollinger Bandwidth* indicator making a new 125-day low then sort by that Condition.

### STEPS

Here is a step-by-step guide for this exercise.

**Step 1** Press the (/) key and type "bb" then press enter.



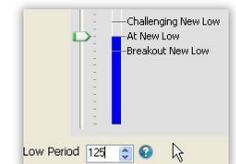
**Step 5** Choose *New Low* from the drop-down menu.



**Step 2** In the *Add Bollinger Bands* dialog box, double click on *Price History* to add the bands.



**Step 6** Set the *Period* to 125 (on a daily chart). Click *OK*.



**Step 3** Press the (/) key and type "Boll" and double click on the *Bollinger Bandwidth* indicator.



**Step 7** This places a single *Condition Bubble* in the price pane on the chart.



**Step 4** Right-click on the *Bollinger Bandwidth* indicator and choose *Create Condition* from the drop-down menu.



**Step 8** Click on the *Condition Bubble* to sort the current WatchList by the new condition and paint the price bars whenever the condition is true.



## RESULTS

Any stocks in the WatchList with a *Bollinger Bandwidth* making a new six month (125-bar) low on the current bar has a *Sort Light* under them. All of these stocks are grouped together at the top of the WatchList.



Symbol	Bollinger Bandwidth	New Low - Linked
1 <b>WWE</b> NYSE	World Wrestling Ent...	
2 <b>TEN</b> NYSE	Tenneco Inc	
3 <b>MLHR</b> Nasdaq	Herman Miller, Inc.	
4 <b>INET</b> Nasdaq	Internet Brands, Inc.	

### Sort

Grouped below those with lights will be the stocks in the WatchList with the most recent occurrences of the condition (ascending in value from 1 bar since true).



24 <b>SCS</b> NYSE	Steelcase Inc	
25 <b>TOWN</b> Nasdaq	Townebank (Va)	
26 <b>AREX</b> Nasdaq	Approach Resource...	
27 <b>NBSX</b> Nasdaq	Neurogesix, Inc	50 bars since true
28 <b>EZPW</b> Nasdaq	Ezcorp, Inc Cl A	
29 <b>LF</b> NYSE		

### Paint bars

Finally, the price bars will be painted for the entire stock history every time the condition occurs.



## REMEMBER

Change the time frame of the chart and all the price bars, Bollinger Bands and Bollinger Bandwidth indicator will adjust to the new time frame.

Change the default settings on the *Bollinger Bandwidth* indicator and the WatchList will automatically be sorted and price bars painted again with the new parameters.

# Appendix: Exercises by Category

## Unusual Activity

Unusually High Trading Range (page 2)  
Stocks with Above Average Volume (page 52)

## Adding Charts

Charts with Different Time Frames (page 14)

## ADX

ADX Values over Forty (page 8)

## Analyst Rating

Increasing Buy Ratings (page 28)

## Bollinger Bands

Bollinger Band Breakout (page 10)  
Bouncing off the Bottom Band (page 12)  
Tightening Bollinger Bands (page 54)

## Breakout

Bollinger Band Breakout (page 10)

## Color Opacity

Compare Multiple MACD Histograms (page 18)

## Compare Plots

Creating a TRIX Histogram (page 16)

## Filter

Filter Out Low Volume Stocks (page 24)  
Price Between \$10 and \$50 (page 42)

## Fundamentals

Falling P/E Ratio (page 22)

## Linear Regression Slope

Paint Down Sloping Price (page 38)

## Lines Crossing

Moving Averages Crossing (page 34)

## MACD Histogram

Compare Multiple MACD Histograms (page 18)  
MACD Histogram Turning Positive (page 30)

## Moving Average

Unusually High Trading Range (page 2)  
Price Above the 20 and 50-week Moving Averages (page 4)  
Creating a TRIX Histogram (page 16)  
Filter Out Low Volume Stocks (page 24)  
Moving Averages Crossing (page 34)  
Ranking by Average Trading Range (page 48)  
Price Staying Above a Moving Average (page 50)  
Stocks with Above Average Volume (page 52)

## News

Identifying News Surges (page 28)

## Overlaying Plots

Adding a Comparison Symbol (page 6)

Compare Multiple MACD Histograms (page 18)

## Oversold

Oversold Stochastics (page 36)

## Paint Price

Bollinger Band Breakout (page 10)

Bouncing off the Bottom Band (page 12)

Paint Down Sloping Price (page 38)

Paint Price by the Close in the Range (page 40)

Price Moving Up Several Days in a Row (page 44)

Stocks with Above Average Volume (page 52)

Tightening Bollinger Bands (page 54)

## P/E Ratio

Falling P/E Ratio (page 22)

## Plot Style

Creating a TRIX Histogram (page 16)

## Price

Price Above the 20 and 50-week Moving Averages (page 4)

Adding a Comparison Symbol (page 6)

Bollinger Band Breakout (page 10)

Bouncing off the Bottom Band (page 12)

Down Ten Percent in a Month (page 20)

Falling P/E Ratio (page 22)

Making or Challenging Highs in Price (page 32)

Moving Averages Crossing (page 34)

Paint Down Sloping Price (page 38)

Paint Price by the Close in the Range (page 40)

Price Between \$10 and \$50 (page 42)

Price Moving Up Several Days in a Row (page 44)

Price Pulling Back after an Uptrend (page 46)

Ranking by Average Trading Range (page 48)

Price Staying Above a Moving Average (page 50)

## RealCode

Unusually High Trading Range (page 2)

Paint Price by the Close in the Range (page 40)

Ranking by Average Trading Range (page 48)

## Reversal

Bouncing off the Bottom Band (page 12)

## Scaling

Adding a Comparison Symbol (page 6)

Compare Multiple MACD Histograms (page 18)

Creating a TRIX Histogram (page 16)

## Sort

Unusually High Trading Range (page 2)  
Price Above the 20 and 50-week Moving Averages (page 4)  
ADX Values over Forty (page 8)  
Bollinger Band Breakout (page 10)  
Bouncing off the Bottom Band (page 12)  
Price Down Ten Percent in a Month (page 20)  
Falling P/E Ratio (page 22)  
Increasing Buy Ratings (page 28)  
MACD Histogram Turning Positive (page 30)  
Making or Challenging Highs in Price (page 32)  
Price Pulling Back after an Uptrend (page 46)  
Stocks with Above Average Volume (page 52)  
Tightening Bollinger Bands (page 54)  
Identifying News Surges (page 28)  
Oversold Stochastics (page 36)  
Price Moving Up Several Days in a Row (page 44)  
Ranking by Average Trading Range (page 48)  
Price Staying Above a Moving Average (page 50)

## Sequence Rule

Bouncing off the Bottom Band (page 12)  
Price Pulling Back after an Uptrend (page 46)

## Stochastics

Oversold Stochastics (page 36)

## Time Frames

Charts with Different Time Frames (page 14)

## TRIX

Creating a TRIX Histogram (page 16)

## True in a Row

Oversold Stochastics (page 36)  
Price Moving Up Several Days in a Row (page 44)  
Price Staying Above a Moving Average (page 50)

## Volatility

Bollinger Band Breakout (page 10)  
Bouncing off the Bottom Band (page 12)  
Tightening Bollinger Bands (page 54)

## Volume

Filter Out Low Volume Stocks (page 24)  
Stocks with Above Average Volume (page 52)







