

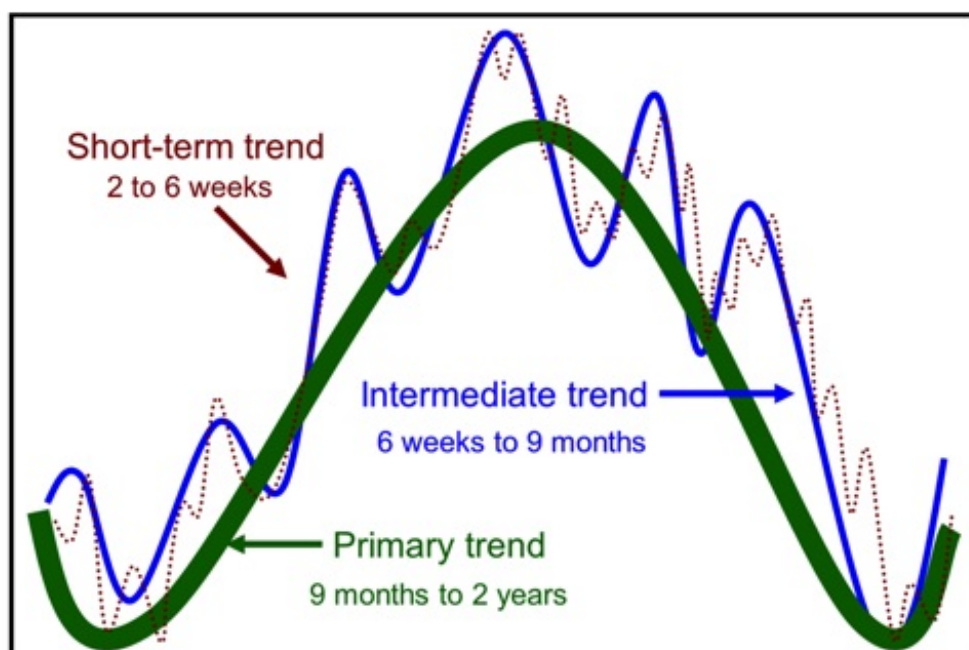
Martin Pring's Special K

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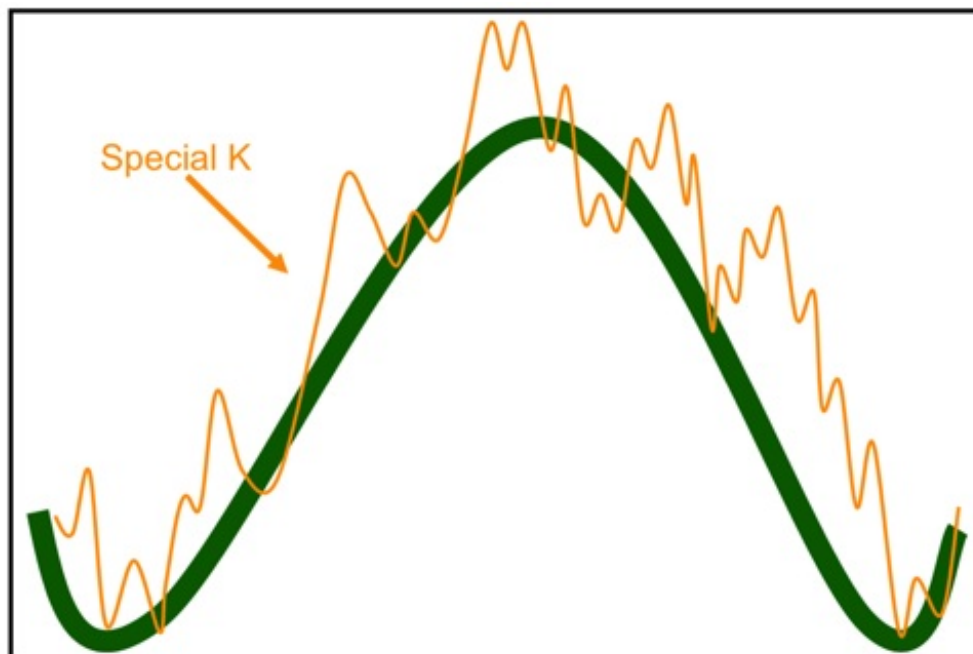
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The Pring Special K is a momentum indicator created by Martin Pring that combines short-term, intermediate and long-term velocity into one complete series, thereby giving us true summed cyclicity. It has two functions, first to identify primary trend reversals at a relatively early stage, and second to use that information for timing short-term pro-trend price moves. Here are all three trends as they might be expressed in an overlaid momentum format:



Here is the (green) primary trend and the (orange) Special K, which is really the short-term trend shown in the previous chart.



In an ideal world, the Special K ought to peak and trough more or less simultaneously with the price at bull and bear market turning points. In most situations that actually happens. When it does, the trick is being able to identify these turning points as quickly as possible after the fact. The formula assumes that prices are revolving around the four-year business cycle. As a result, when a linear uptrend, such as the 1990's secular bull market in equities develops, the Special K leads turning points. Alternatively, when the cycle is truncated, as was the case for the 1987 crash, the indicator is late. Charts 1 and 2 show that most of the time the price and SPK reverse simultaneously.

The prime function of the Special K then is to identify primary trend turning points.

Since this indicator also includes short-term data in its calculation a subsidiary benefit lies in the identification of smaller trends, for trading purposes, and putting that in context with the direction and maturity of the primary trend. Let's consider both those aspects, starting with primary trend identification.

Calculation

The Special K is the sum of several different weighted averages of different rate-of-change calculations. The periods and weightings were selected based on years of market observations.

$$\begin{aligned}
 \text{Special K} = & 10 \text{ Period Simple Moving Average of ROC}(10) * 1 \\
 & + 10 \text{ Period Simple Moving Average of ROC}(15) * 2 \\
 & + 10 \text{ Period Simple Moving Average of ROC}(20) * 3 \\
 & + 15 \text{ Period Simple Moving Average of ROC}(30) * 4 \\
 & + 50 \text{ Period Simple Moving Average of ROC}(40) * 1 \\
 & + 65 \text{ Period Simple Moving Average of ROC}(65) * 2 \\
 & + 75 \text{ Period Simple Moving Average of ROC}(75) * 3 \\
 & + 100 \text{ Period Simple Moving Average of ROC}(100) * 4 \\
 & + 130 \text{ Period Simple Moving Average of ROC}(195) * 1 \\
 & + 130 \text{ Period Simple Moving Average of ROC}(265) * 2 \\
 & + 130 \text{ Period Simple Moving Average of ROC}(390) * 3 \\
 & + 195 \text{ Period Simple Moving Average of ROC}(530) * 4
 \end{aligned}$$

Note that at least 725 data points are required to accurately calculate this indicator. If less data is available, then the final line of the calculation is skipped.

Using the Special K to Identify Long-term Price Movements

With the benefit of hindsight, it is easy to spot the Special K turning points and relate them to primary trend peaks and troughs, as shown by the vertical arrows in the charts below. Unfortunately, since traders and investors work in real time, they do not have the luxury of hindsight. Here are several techniques that help in spotting primary trend turning points using the Special K:

1. Since the Special K is quite a jagged indicator it lends itself best to trendline construction. For example, if a trendline of 9-months or more is violated this usually means that the primary trend for the Special K has reversed and when the indicator changes trend so usually does the price.
2. It is normal to run a moving average through the Special K. The default is a 100-day smoothed by a 100-day SMA. Crossovers of the average typically signal a reversal in the direction of the primary trend. Occasionally, as with all moving average situations, whipsaws are triggered. When combined with a trendline break, though, a stronger and more reliable signal is triggered. Examples at the 2003 and 2009 bottoms for US equities are shown in the first chart above, where MA crosses and trendline violations develop more or less simultaneously.
3. Occasionally the Special K traces out price patterns. When they are confirmed by some kind of trend reversal in the price itself this usually represents a valid indication of a reversal in the prevailing primary trend. The GLD chart below offers two examples.



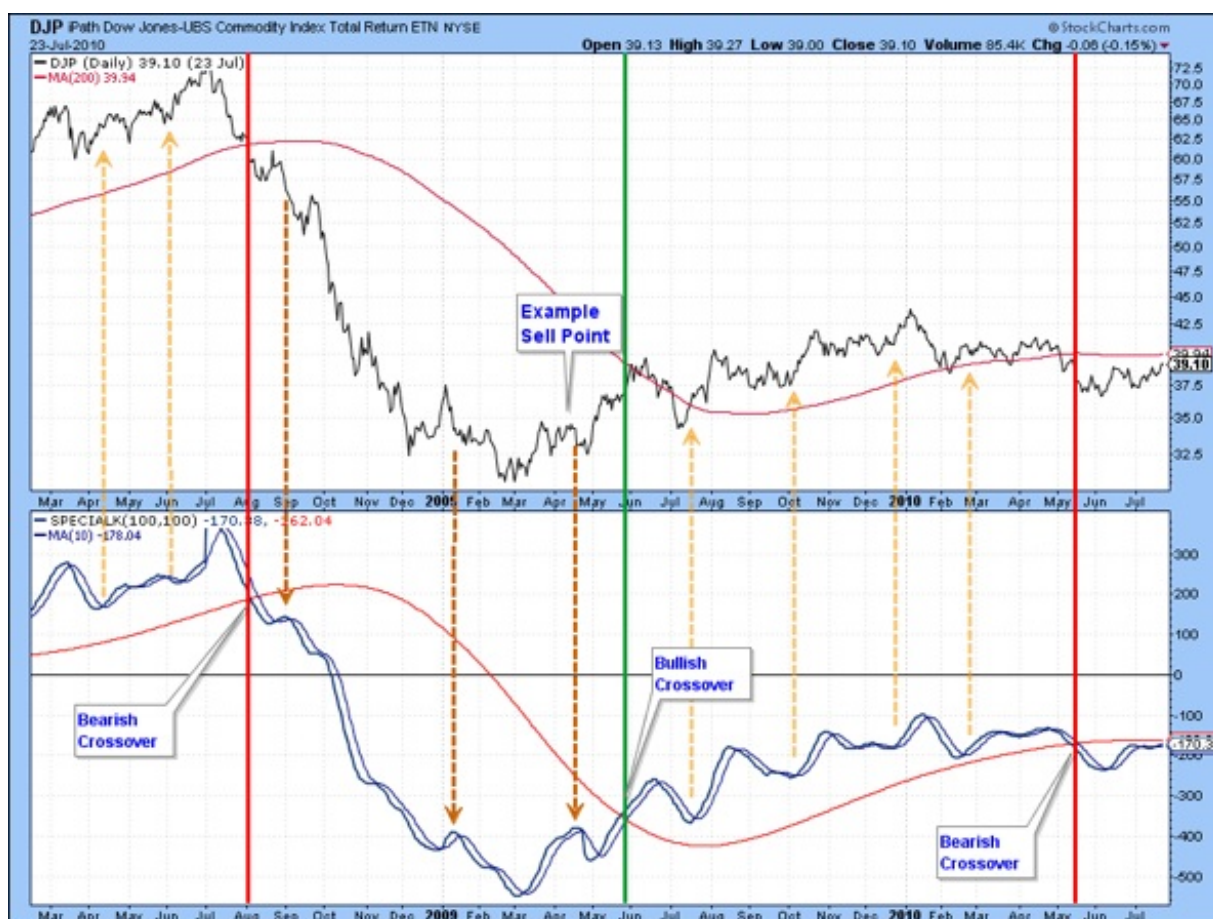


It is important to note that calculating the initial plot of the Special K involves several years of data. To really appreciate the long-term perspective offered by this indicator 5-10 years of additional data are required. That way it's possible to see if the security in question is experiencing the expected cyclical swings. Most do, but occasionally you will find some that do not.

Identifying Pro Trend Short-term Buy and Sell Signals

One of the most important things for short-term traders to grasp is the fact that trades executed in the direction of the main trend are much more likely to be successful than those generated in a counter-cyclical way. An objective method of determining the direction of the primary trend is to use the Special K. Obviously we can easily tell with the benefit of hindsight where the actual Special K peaks and troughs formed but in real time we do not have this luxury. One solution is to determine its position relative to its 100-day MA. Positive readings (i.e. above the MA) would indicate a primary bull market and vice versa.

When the direction of the primary trend has been determined to be bullish, trades from the long side would be initiated when the Special K itself crosses above its 10-day MA. These are shown with orange, upward arrows on the chart below. Trades would be closed out when the Special K re-crosses back below its 10-day MA. Short sales would be initiated in the opposite way i.e. when the Special K is below its long-term MA and crosses below its 10-day MA. The chart below shows such a system for the Dow Jones UBS Commodity Index. The green vertical line represents the start of a bull market phase as defined by the Special K/100-day MA relationship.



Note that no buy signals are generated during the bearish periods, only sell signals (brown, downward arrows). The “Example Sell Point” was subpar because it developed during a bull market, but unfortunately, the system was still in a bearish mode because the Special K was below its 100-day MA showing that this approach is far from perfect. As with all technical indicators, rather than blindly using this approach as a mechanical system, it's better to use pro trend signals as an alert and then use other indicators as a filter in a “weight of the evidence” approach.

- Martin Pring

Using with SharpCharts

The Special K is available as an indicator for SharpCharts. The first line in the indicator is the raw Special K value. The second line is a double smoothed moving average of the raw Special K value, which acts as a signal line.

The indicator can be positioned above, below or behind the underlying price plot. Placing the Special K directly behind the price plot accentuates the movements relative to the price action of the underlying security.

Users can adjust the signal line settings by changing the numbers in the Parameters box. The two parameters specify the number of periods in the two simple moving averages used for smoothing. The default parameter values are 100,100. Users can also apply “advanced options” to add a horizontal line.



Suggested Scans

Special K Bullish Short-Term Cross

This scan reveals stocks where Special K is above its signal line. A bullish signal is triggered when Special K crosses over its 10-day moving average.

```
[type = stock] AND [country = US]
AND [Daily SMA(20,Daily Volume) > 40000]
AND [Daily SMA(60,Daily Close) > 20]

AND [Special K > Special K Signal(100,100)]
AND [Special K x SMA(10,Special K)]
```

Special K Bearish Short-Term Cross

This scan reveals stocks where Special K is below its signal line. A bearish signal is triggered when Special K crosses below its 10-day moving average.

```
[type = stock] AND [country = US]
AND [Daily SMA(20,Daily Volume) > 40000]
AND [Daily SMA(60,Daily Close) > 20]

AND [Special K < Special K Signal(100,100)]
AND [SMA(10,Special K) x Special K]
```

For more details on the syntax to use for Special K scans, please see our [Scanning](#)

Indicator Reference in the Support Center.