

Identifying Tops and Bottoms Using the Sweet Pea Deep Dip Triple Oscillator Divergence Concept

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As technical analysts we use various tools to consider historical price and volume characteristics of the market to measure factors such as price trends, power and momentum. Oscillators are particularly important tools because they often lead price by changing direction before the price changes direction, thus helping traders to frame buy and sell decisions.

Oscillators got their name because they oscillate up and down within a fixed range over and under a central line. That is, they don't follow a price up and down a price chart like a trendline or a moving average; instead, they oscillate up and down from an upper overbought zone to a lower oversold zone. When an oscillator crosses above the overbought zone it can be compared to an automobile exceeding the speed limit. If the oscillator crosses below the oversold zone, it's like an automobile going too slow for the prevailing traffic flow.

Many oscillators consist of a pair of oscillating lines: a "fast" line, which is the basic value of the oscillator, and a "slow" line, which is usually some form of moving average of the fast line. There are at least three ways to utilize oscillators in the technical analysis process:

1. Look for crosses of the slow line by the fast line.
2. Look for the oscillator to cross into and then out of overbought or oversold territory.
3. Look for divergences between the movement of the oscillator and the movement of the price.

This article will focus primarily on process #3, looking for divergences. We will discuss how to identify and trade divergences between the movement of the oscillator and the price.

Divergences occur when two or more successive oscillator peaks diverge in direction from corresponding price highs or when two or more oscillator valleys

diverge in direction from corresponding price lows. For example, consider the chart in [Figure 1](#) displaying price and an oscillator.

Figure 1



On the left of the price chart we see two price peaks, or “bumps” in a strong uptrend. Note that the more recent price bump is higher than the preceding bump. Now look at the two oscillator bumps occurring at the same time as the price bumps. Notice that the most recent oscillator bump is lower than the earlier price high bump. If a trendline is drawn from one price bump to the next price bump and another trendline is drawn between the two corresponding oscillator bumps, the two lines can be seen to diverge away from one another. This is referred to as “divergence” and is usually a sign that the uptrend in price is losing steam and energy and that we may be approaching the end of the uptrend.

Now let’s look at the right side of the chart in Figure 1, where prices are in a strong downtrend. This time the “bumps” are price valleys. A trendline has been drawn from one price valley to the next price valley and another trendline has been drawn between the two corresponding oscillator valleys. What do we see? We see that the two lines are pointing in opposite directions, converging toward

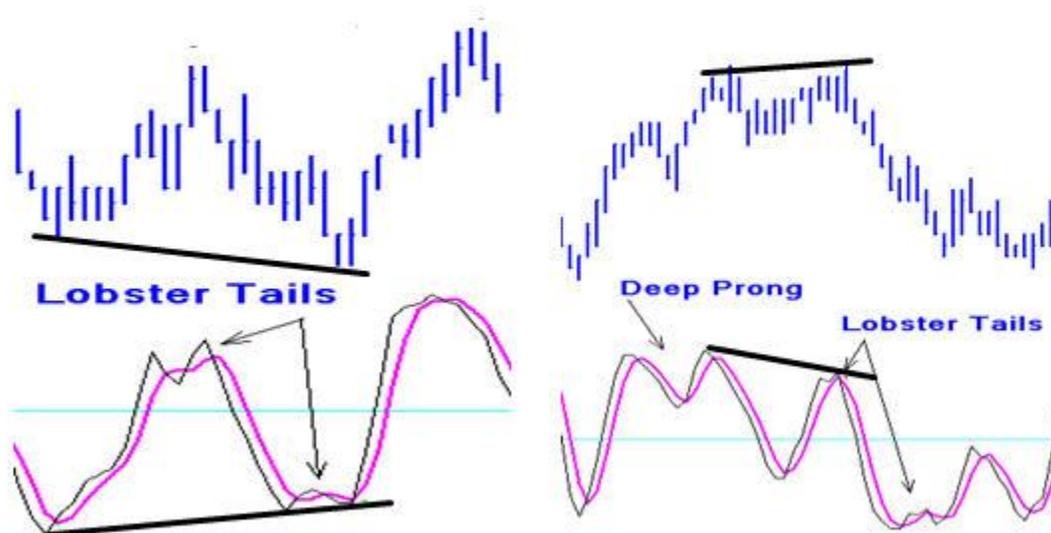
one another. This is a sign that the downtrend in price is losing steam and energy and that we should be looking for an opportunity to buy instead of sell.

Confusingly, most traders use the term “divergence” to refer to both of the conditions just described, even though the trendlines *converge* in downtrends and *diverge* in uptrends. Nonetheless, to conform to popular usage, we will be using the term “divergence” for the rest of this article to refer to both divergence in uptrends and convergence in downtrends. So, a sell divergence occurs when *price is making higher highs while the oscillator is making lower highs*. Conversely, a buy divergence occurs when *price is making lower lows while the oscillator is making higher lows*.

One problem with divergence analysis is this: Changes in trend direction come in many sizes, from very brief to very deep, so the trader has to decide what kind of divergence pattern is most reliable for putting on a winning trade. When the price bars are in a strong uptrend you will often see a lot of small peaks and valleys caused by “sloppiness” in the price wiggles as shown in Figure 2 below.

Figure 2

Lobster Tails and Deep Prongs



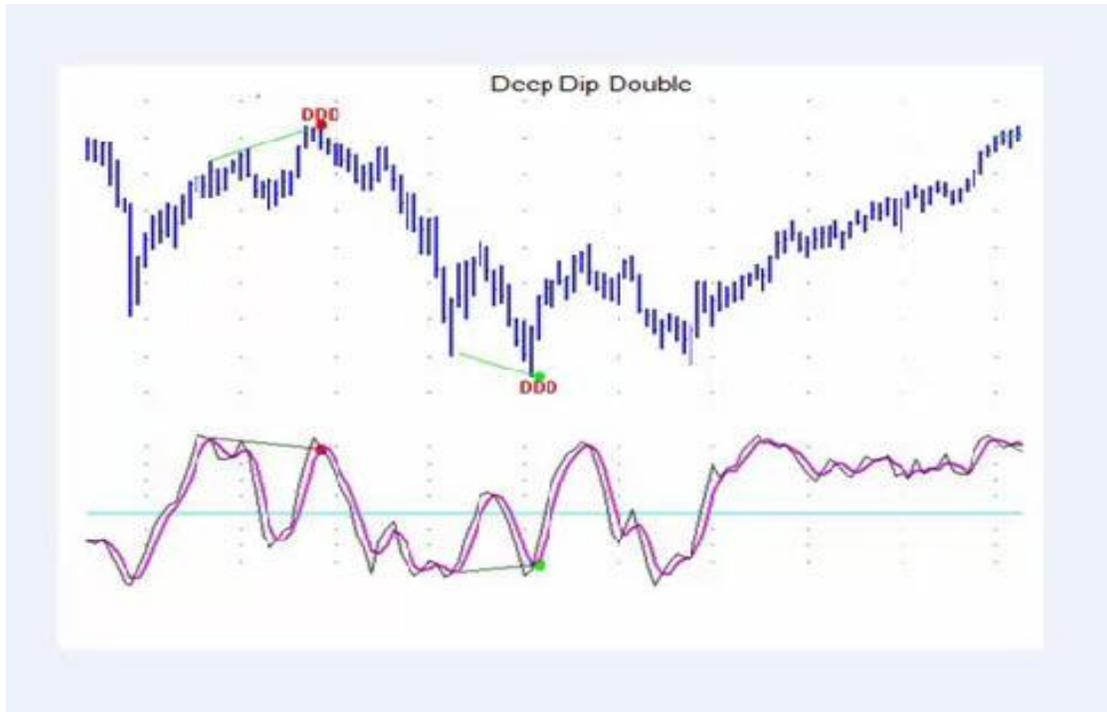
Note that the first major bump in the oscillator below the price contains minor wiggles that should be ignored. We call that pattern a “lobster tail”. If it is bigger than a small lobster tail, we call it a “prong”, or “deep prong”. These are just fun nicknames. Once the oscillator crosses below the midline and back above it, we get a second bump that we call a “smoothie” because it is relatively smooth. These false signals can cause a lot of frustration for the divergence trader, so we must use a set of rules that allow us to identify only significant divergence patterns that are likely to anticipate a major trend reversal.

The Deep Dip Concept

One of the most reliable ways to make sure your divergence signal is valid is to ignore lobster tails and prongs and look for what is known as a “deep dip” divergence pattern. The concept of the deep dip pattern was first introduced by trader and divergence expert Jay Dorger in the 1990’s. This concept requires that the oscillator must cross its midline between bumps to ensure that the divergence is big enough to be taken seriously.

A deep dip oscillator pattern looks something like the example in [Figure 3](#).

Figure 3



On the left side of this chart we are in an uptrend and are watching for a divergence pattern to signal the end of the uptrend and the beginning of a new downtrend. The first step in this process is to look for a hill to form in the oscillator while it is above the midline. The oscillator should then roll over and cross below the midline. Before reaching the oversold zone, the oscillator should reverse back up above the midline, forming a valley below the midline.

The oscillator should then create a second, lower, hill-shaped bump above the midline. When it again rolls over while the price continues to reach new high levels, we have a strong sell signal. Although the oscillator must display a pair of distinct successively lower peaks interspersed by a distinct valley below the centerline for a sell reversal signal in an uptrend, the price doesn't necessarily have to display recognizable peaks and valleys over that interval. *For a valid sell divergence in an uptrend to occur, the price level corresponding to the rightmost (lower) oscillator peak must simply be higher than the price level corresponding to the previous (higher) oscillator peak to its left.*

Conversely, for a buy signal to occur in a downtrend we must wait for an up-divergence to develop in the oscillator valleys below their midline. The first valley will have to reach back above the midline before returning to create a second,

higher valley. After the divergence forms between the two oscillator valleys and a downtrending series of prices, we have a strong buy signal.

The oscillator below the price in these examples is a Stochastics oscillator. The trendlines, dots and “DDD” (“deep dip double”) annotation on the chart were automatically drawn by the JADV Deep Dip Double Divergence tool from Jan Arps’ Traders’ Toolbox. (www.janarps.com)

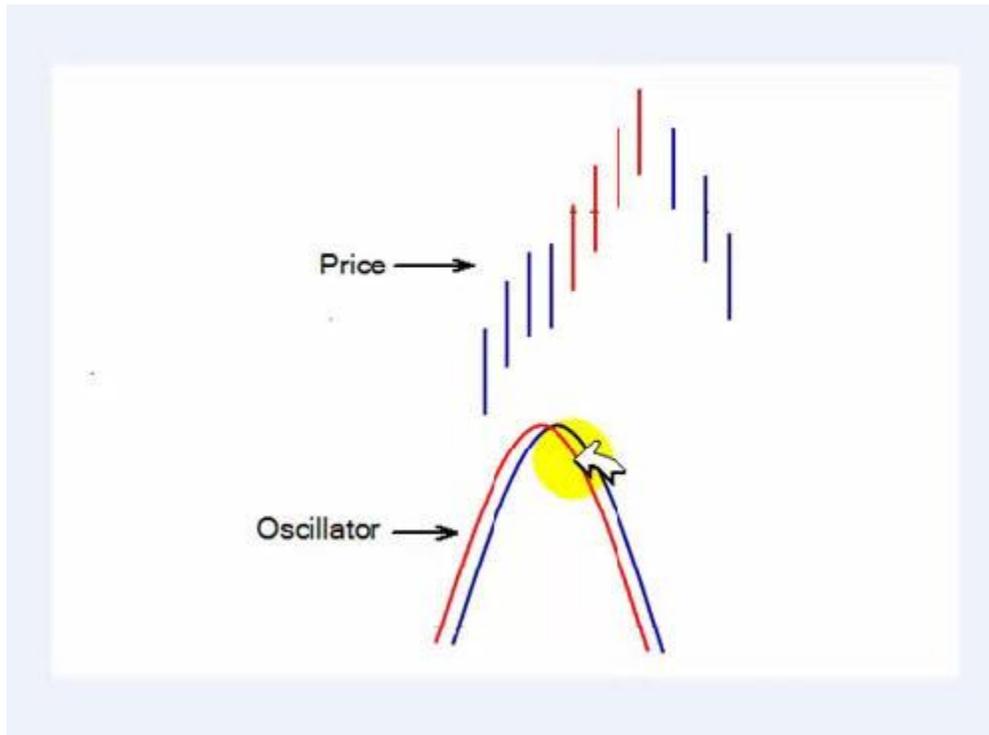
Divergence analysis can be a very powerful tool to identify potential major reversal points in the price trends. However, it sometimes takes a trained eye to quickly spot divergences between the price and an oscillator, so here’s a reminder: *always look for significant bumps in the oscillator first. Then look at price to see if these bumps are diverging from the price trend direction.* In the oscillator, look for falling peaks for sell signals and rising valleys for buy signals. Then look for corresponding rising peaks or falling valleys or in the price.

Watch for Crossings

You want to be quick in identifying oscillator bumps. If you wait until an oscillator bump is fully formed, referred to as a “roundover”, you may have lost the opportunity to get into a trade near the beginning of the new trend. Many divergence traders don’t wait for the roundover to complete to look for significant oscillator turns. Instead, they look for crossings, where the fast oscillator line crosses below its slow line near the top of a peak or above its slow line near the bottom of a valley. If this developing bump is the second part of a pair that is diverging from price and meets our other qualifications, we have a strong and timely indication that prices are about to reverse direction.

In Figure 5 we see the fast line crossing below the slow line of a developing oscillator peak before the slow oscillator line actually rounds over. Consequently, in this example, we can see the oscillator crossing signal approximately three bars before the actual price peak occurs. This gives us some extra time to set up for a trade when the next price bar makes a lower high.

Figure 5



The Sweet Pea Deep Dip Triple Divergence Pattern: Solving the Problem of False Divergence Signals in Strongly Trending Markets

Double bump divergences work well in oscillating markets, meaning markets where prices are moving sideways or gently trending. However, in strongly trending markets, double bump divergence signals sometimes go astray and give signals before the end of the trend. One way to deal with this problem is to wait for a triple bump divergence to confirm the end of the trend. Triple bump divergences are just what the name implies: three bumps in the oscillator forming a diverging pattern with respect to the price trend, instead of just two bumps.

The important fact about triple bump divergences is that they are more likely than double bump divergences to occur at the end of a strong trend and less likely to occur in the middle of a strong trend.

For example, Figure 6 displays a price chart with the Stochastics oscillator displaying a triple-bump deep-dip divergence buy pattern near the bottom of a

strong downtrend and a triple-bump deep-dip divergence sell pattern near the top of a strong uptrend.

Figure 6



Let's consider the types of price pattern associated with a triple-bump sell divergence. I want to first call your attention to an old standby in technical analysis, the "Head and Shoulders" formation. A Head and Shoulders is three peaks in price that look like a head and shoulders outline. Usually the second peak is the tallest and is referred to as the "Head" while the "Shoulders" represent the (lower) first and third peaks. The common trading rule is to draw a trendline between the bottoms of the two shoulders (the "neckline") and take your short position when the price crosses the extension of the neckline.

However, we won't be using the neckline break in this study of the triple-bump divergence. Instead, when we see a head and shoulders top formation in the price, we will be making these small, but very important additional stipulations for it to qualify for a triple-bump divergence topping pattern: First, *I want the*

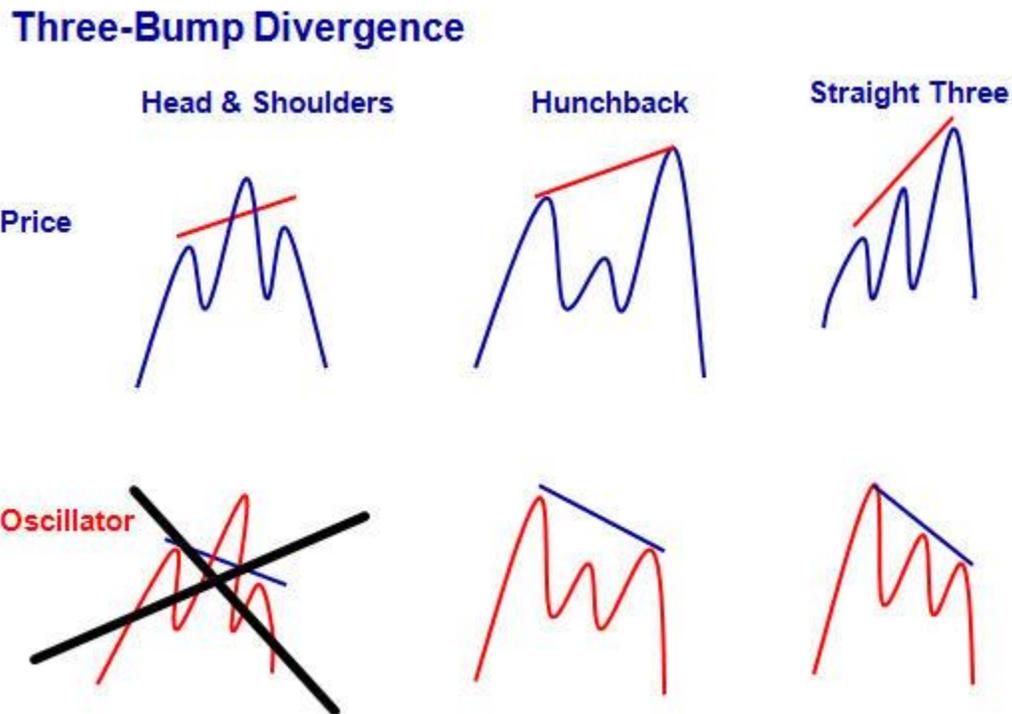
third bump in price (the “right shoulder”) to be higher than or equal to the first bump (the “left shoulder”). Also, this triple-bump price formation should occur at the end of a long, hard-charging trend; not somewhere in the middle of a sloppy sideways price movement.

At the same time, I want the first peak in the corresponding oscillator pattern to be the highest of the three to qualify as a sell signal. The second and third oscillator peaks must both be lower than the first oscillator peak. Note that the second oscillator peak may still be lower than the third oscillator peak, but it must not be higher than the first peak! The most important factor is that the first oscillator peak be higher than the third peak.

Jay Dorger, the originator of this concept refers to the triple-bump divergence pattern as “Sweet Pea”, his slang for “Three Peaks”, so we have incorporated that into the name of our pattern identification tool.

When we are looking for a Sweet Pea pattern for a triple-bump sell setup, any of the three price patterns, the “Head & Shoulders”, the “Hunchback”, and the “Straight Three” shown in Figure 7 below would qualify. However, it is important to note that a “Head & Shoulders” pattern DOES NOT qualify in the oscillator, because the leftmost peak of the oscillator must be the highest of the three.

Figure 7



If you turn these images upside-down, you would have a set of buy divergence patterns, with the exception of the inverse head & shoulders in the oscillator which does not qualify, as mentioned above. Now the leftmost valley of the inverted price pattern must be lower than the other two valleys while the middle valley can be either higher or lower than the rightmost valley, so long as it is lower than the leftmost valley. In other words, no inverse head-and-shoulders in the oscillator!

As in everything technical, these patterns are easier to see in hindsight. They are there in real time but only after some time has gone by do their individual fingerprints truly reveal themselves. Thus it is quite helpful to computerize the recognition of these patterns to alert the trader. We can't trade hindsight.

Remember, oscillator divergence is trying to signal a new trend at its very beginning, and that is dangerous, because you are going against the momentum of the old trend. Sometimes divergence signals merely call a hesitation in the old trend, in which scalping a few points is the best approach, and then the old trend just kicks back in and keeps going in the original direction.

Divergence traders seeking to identify significant turning points must be cautious, only taking well-formed three-bump formations. Oscillator bumps must dig significantly below their midline in order to qualify as a deep dip divergence bump. A lot of triples in a strong trend can be shallow and mushy. They are easy to see in hindsight, but would we really have made a trade on some of those triples? Eliminating the mush is why we look specifically for the Sweet Pea Deep Dip Triple divergence pattern. We might lose some good trades by sticking with the deep dip theory, but in the long run it is a safer and more reliable indication of a potential major trend turn.

In summary, divergence is a powerful tool to identify potential reversals in price direction. Waiting for a divergence signal before trading a reversal in trend direction can greatly help the trader with his timing. No matter what time frame or symbol you trade, when you find a Deep Dip Triple divergence bump formation and let the Arps Sweet Pea Divergence Finder “pat you on the back” to confirm the pattern, I do believe you will value this pattern as a treasured component of your trading toolbox, or at least be aware of it in your trading.

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