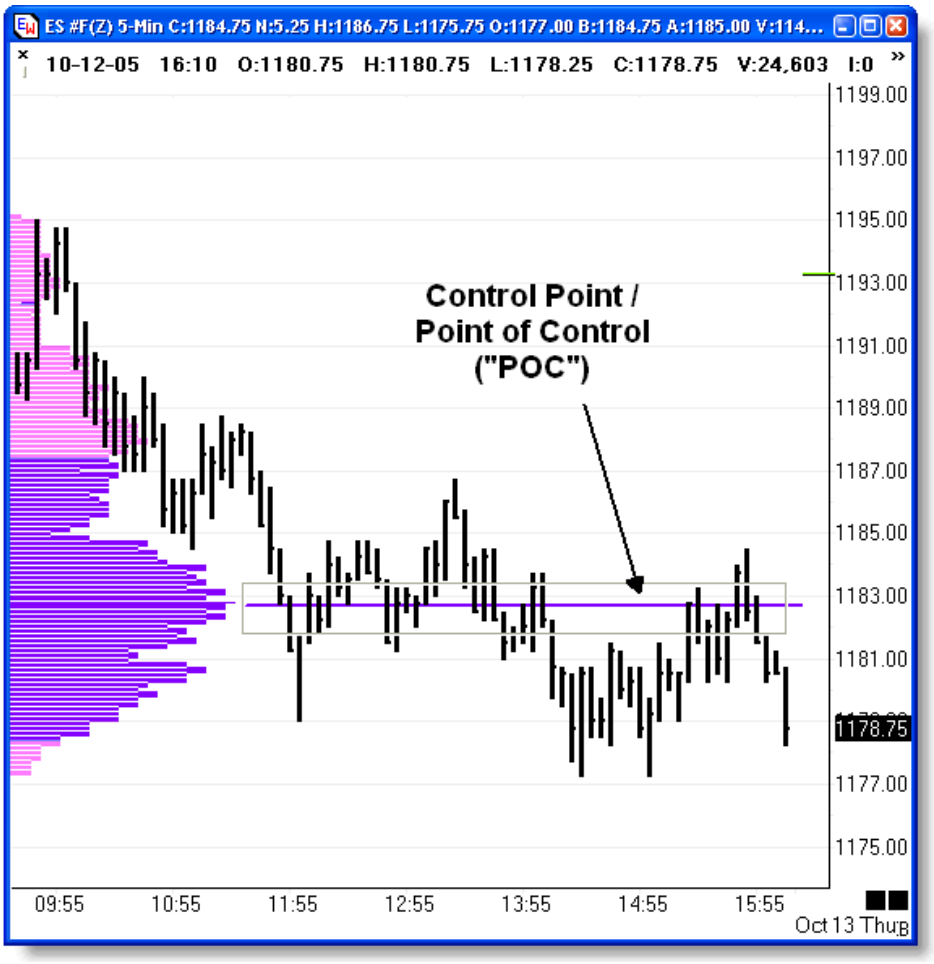
Studies: Price Histogram POC

In this article I will discuss three topics: The Price Histogram study, the Virgin POC option for that study, and a method for trading with the Virgin POC that I call the Universal Method. You can see a record of recent trades here: http://www.enthios.com/blog.htm

Price Histogram
The Price Histogram is my favorite tool for two reasons: It is intuitive, and it is extremely effective. There is no hocus pocus or mathematical wizardry; no need for exponentials, or smoothing, or weighting. The Price Histogram simply shows you what you should be able to see with the naked eye: where the market was most "comfortable" trading, over any given period. It is also rare among technical indicators because it is leading, not lagging. It is a leading indicator because it tells you, quite far in advance, where the market is likely to turn. Moving averages and oscillators cannot predict; they can only suggest, and never in advance, that the market is overbought or oversold. Lagging indicators are also notoriously bad at keeping you out of sideways chop.

Traditionally, the Price Histogram study (or others, sometimes referred to as a Market Profile) has been applied to a 30-minute chart to provide a histogram of market activity for one day. Unless I am looking far back in time, I prefer a 5-minute chart because it is more precise. The chart below shows a 5-minute Price Histogram study.

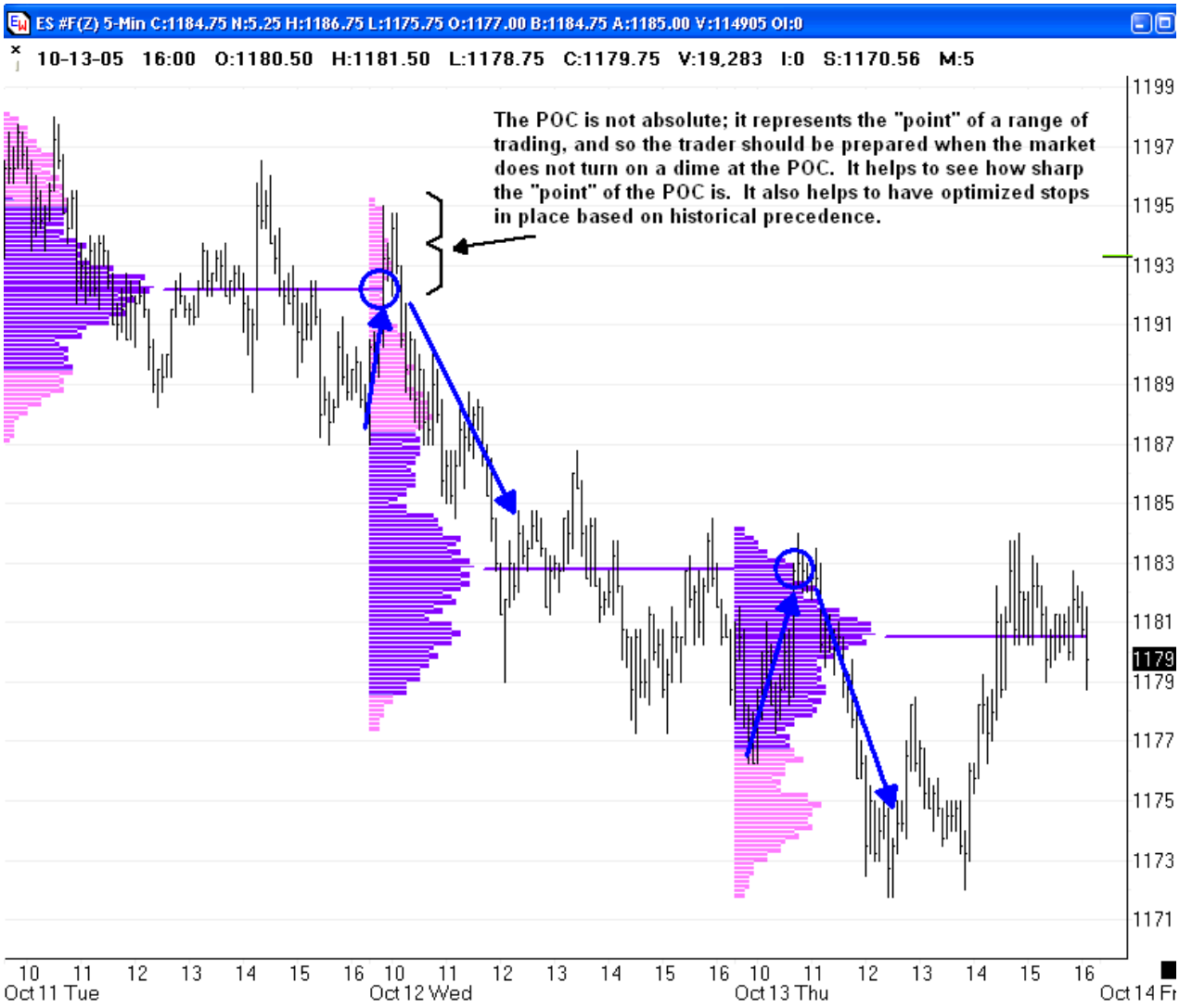


The histogram on the left side of the chart is drawn during the day in five-minute increments. The length of each horizontal line in the histogram represents the amount of time that the market spent at that corresponding price. Thus if the market spends a great amount of time at a particular price, the histogram line for that price will be longer. The longest line in the histogram is the one price where the market spent the most amount of time. It is called the Point of Control or, alternatively, the Control Point. Most traders refer to it as the 'POC' for short.

In this chart, you can see that the POC lies at 1183. The beauty of the Price Histogram is that even if it was not there, you could probably still look at the chart and guess that the most amount of time was spent in the region of 1182~1184.

What is significant about the POC? Traders collectively remember it, consciously or subconsciously. That's all. No math needed. And the more time that the market trades at a particular price, the longer - or greater - that memory. Psychologically, the POC acts as a center of gravity. In this chart, the POC for October 12, 2005 was 1183. Let's scroll down and look at what happened on both the day before, and the day after, October 12.

This next chart shows what happened on the day before, and after, October 12. It is an excellent, albeit ideal, illustration of the power of the Price Histogram. Don't worry. I will also show you what can go wrong.



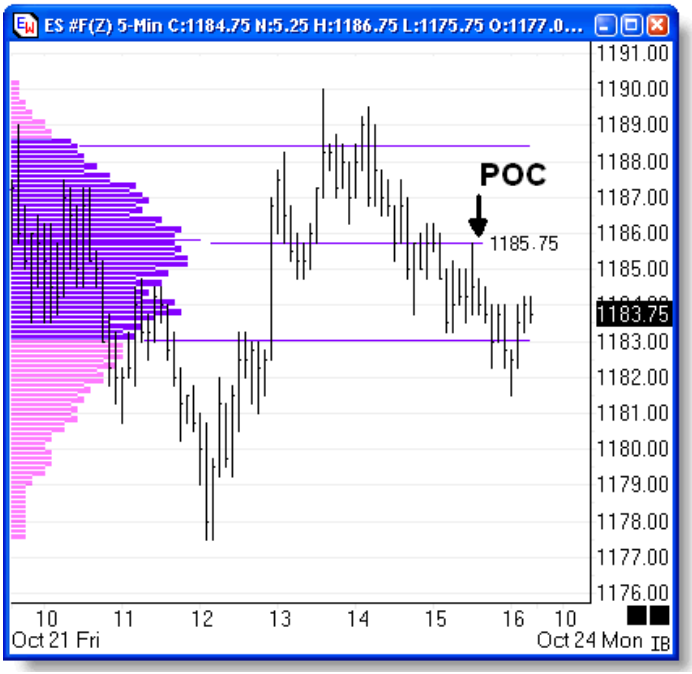
The POC on 10/11 was 1193. Even without the histogram and the POC line, you should be able to see that the market spent most of the day in the 1191~1193 band. At the end of the day, the market closed almost 5 points below the POC. Overnight it gapped down slightly but then, for whatever reason, started to head back up. It is important to recognize that we cannot predict whether the market will go up or down. We can only be reasonably sure that as the market moves closer to a POC line, the gravitational "pull" of that line increases. What happens when prices hit the line? The same that happens to any object with weight when it comes into contact with the source of gravity: it bounces. If it bounces hard enough - as in a tennis ball hitting a tennis racket - it will return very quickly from whence it came. On the morning of October 12 you can see that the market moved back up to touch the previous day's POC. Bullish traders tried to push it beyond, but not for long: that is the strength of the POC. This also illustrates that the POC is not exact; most people familiar with price action are aware that when prices reach a turning point - be it a previous high, low, or congestion range - that point usually will not act as an exact ceiling or floor. What happens at that point depends very much upon the players in the market at that point in time, and that means that what happens is random. Some traders may try to move the market higher by buying. If the collective "will" of the market is in agreement, then the market will move past the POC. This does not happen often. Because it does not happen often, astute traders can turn that knowledge into a profitable trading system. That is exactly what I have done. What usually happens instead is that the market may try to move past but then the buyers will dissipate, and sellers will take over.

Notice in the above chart that the exact same event occurred on October 13. The market closed below the POC, then moved back up the following day. When prices hit the POC, buyers turned to sellers and the market turned back down.

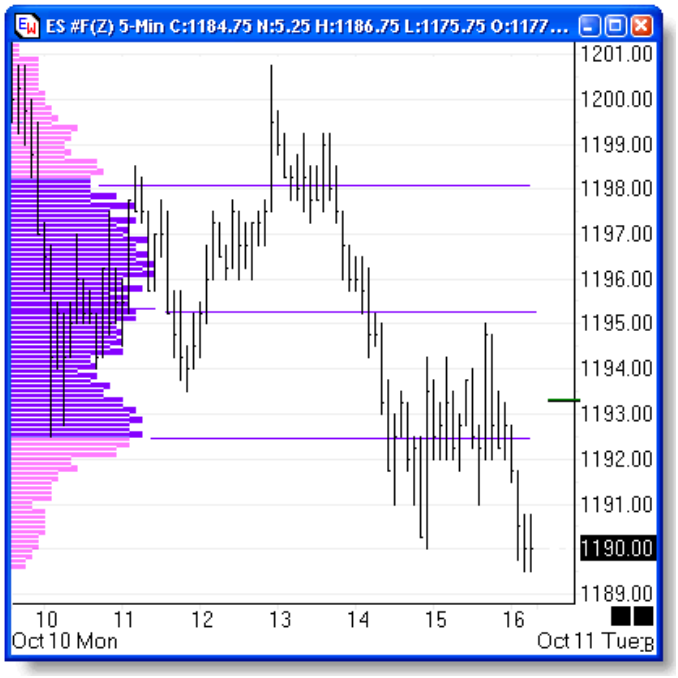
Point of Control Formation

The histogram tends to form a bell curve, although it is not always **symmetrical**. Because it is "turned sideways", it more closely resembles a pennant. If the pennant has a sharp "tip" protruding off to the right, that indicates that prices traded for a long time in a relatively limited range and so the "gravitational pull" of the resulting POC will be quite strong. If the pennant has a **blunt** tip, then the POC is not well defined and should be treated accordingly. Sometimes a pennant can have **two tips**, one just slightly lesser than the other. In this case, although the indicator only shows one POC, there are two POC's. Therefore it is helpful to pay attention to the actual shape of the histogram and draw your conclusions accordingly.

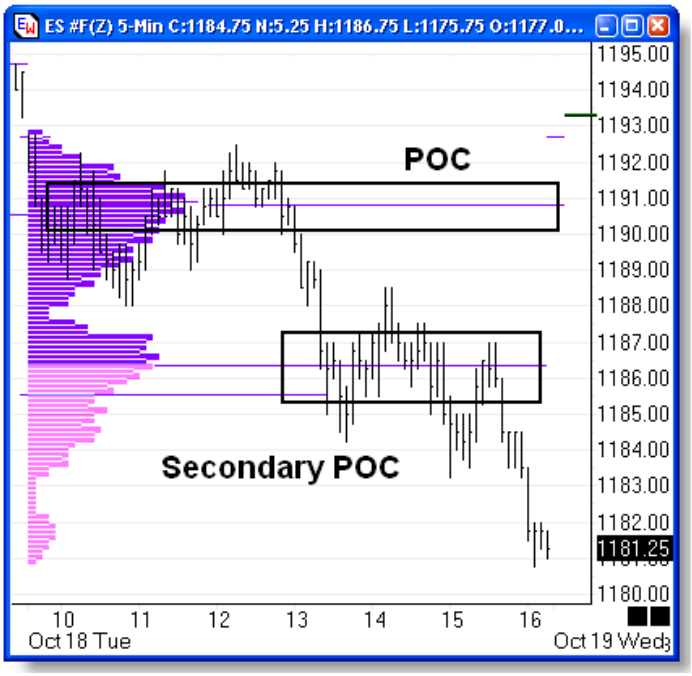
Symmetrical Pennant



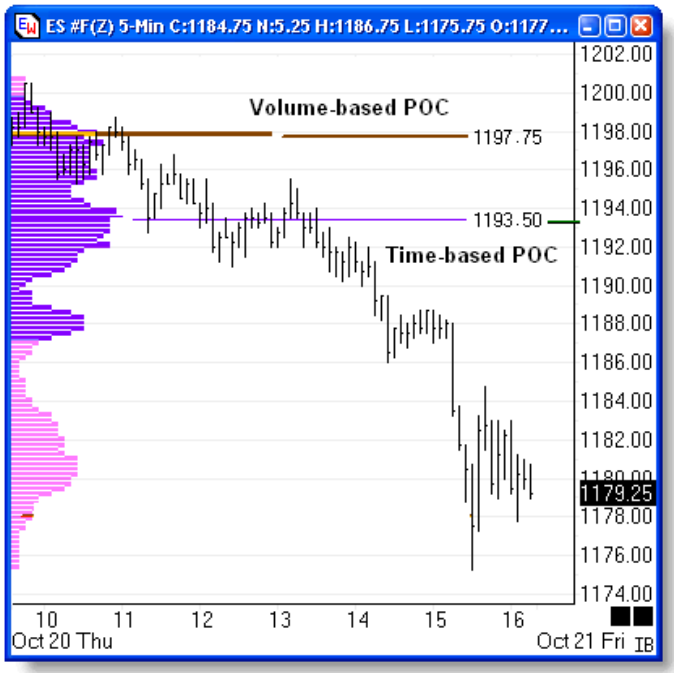
Blunt Pennant



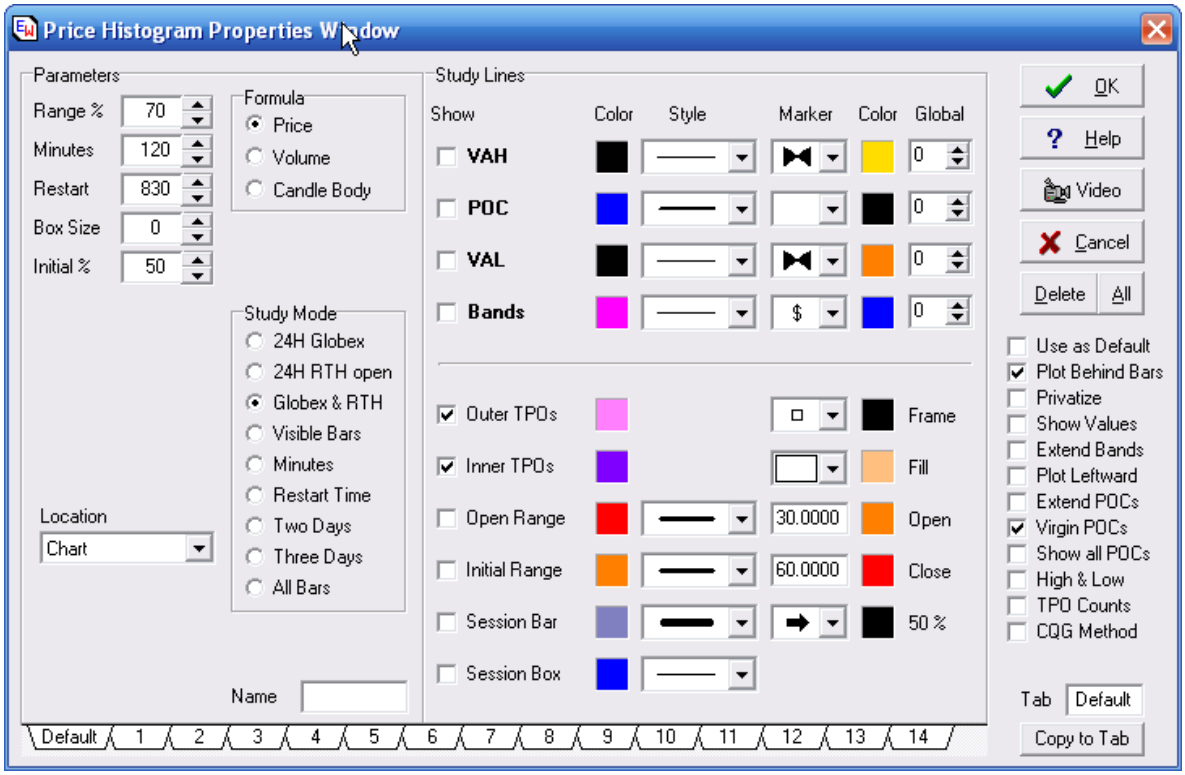
Double Pennant



Diverging Time and Volume POC's



In the Properties dialogue box shown below, the default setting is for a Time based profile. There are options for **Volume-based**, and Candle-based. Typically the Time and Volume based profiles generate POC's that are almost exactly the same. You can check this by running two overlapping studies, one for Time and one for Volume. I usually do not show the histogram on the second study, only the POC. In those cases where the Volume-based POC is different from the Time-based POC, I will consider both as viable.

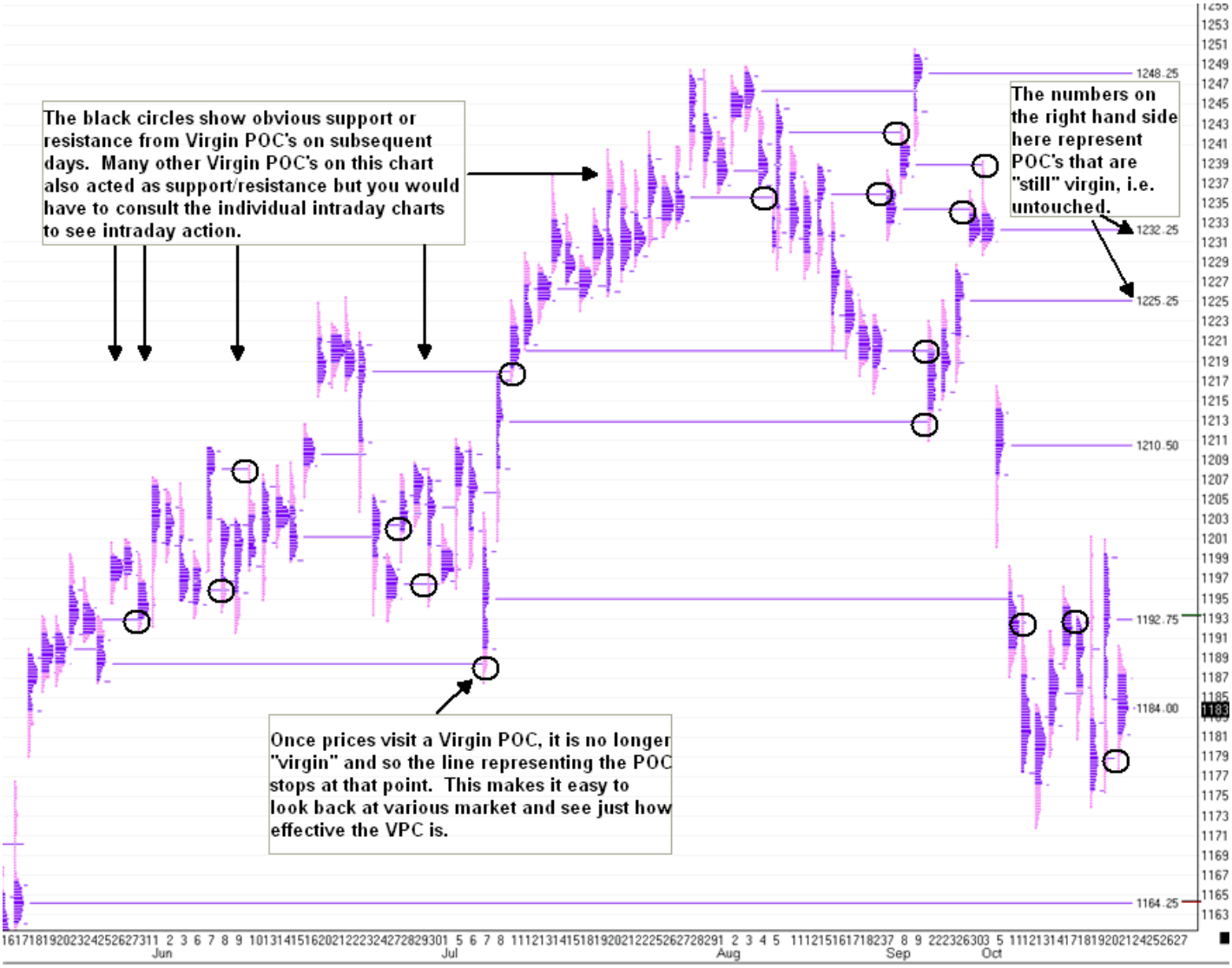


The Virgin POC

A 'Virgin' POC is one that has not been touched by prices on subsequent days. It is a term that I came up with but its significance was first brought to my attention by a friend, Jim Swartz, who some of you may know as NQoos. The logic is simple: as described above, a POC acts as a center of gravity for the market. As prices move towards a POC, its gravitational pull becomes greater. Two things happen: the likelihood of prices moving towards that POC increases, and the likelihood of the market bouncing, or reversing, at that point increases. But what happens after prices hit the POC, retrace, then move on through? In that case, the POC is no longer virgin. Psychologically, the market no longer sees it as a significant support or resistance pivot. Traders may still see the prices that originally formed the POC as a congestion zone, but they will also note that prices moved through that congestion, and so it has been 'broken.' It is no longer virgin. It is less dependable as a turning point. Again, there is no hocus pocus to this; it is just simple common sense.

The 'Virgin POCs' option in the Price Histogram study draws the POC line to the right until such a time as it is visited by prices, at which point it is no longer Virgin. The significance of the Virgin POC (or "**VPC**", as I call it) is shown clearly in the 30-minute chart (below) that shows the Price Histograms for each day over the past five months.

The black circles show where a VPC clearly and obviously acted as a price attractor and reversal point. In addition, many other VPC's on this chart also acted as support/resistance but you would have to consult the individual intraday chart to see the price action. In the next section, we will look at several examples of intraday action relative to a Virgin POC from a previous day.

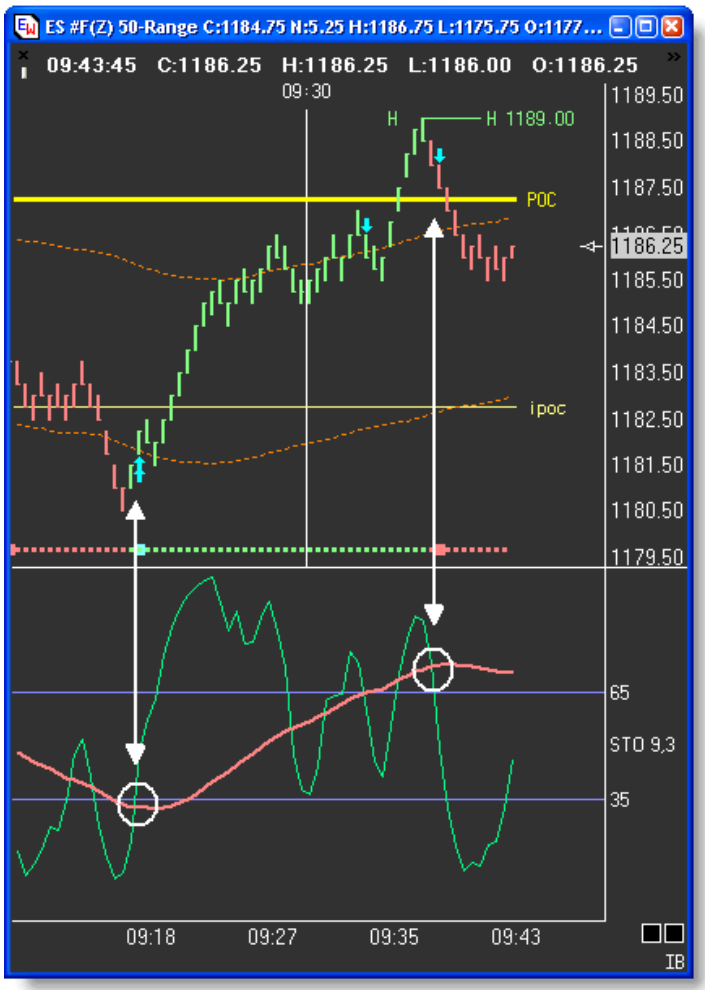


The Universal Method

So how can we trade with this knowledge? If prices move up toward a Virgin POC from below, you could simply short the VPOC. If prices move down toward a Virgin POC from above, you could simply buy the POC. I am a bit more cautious. I look for confirmation from lagging indicators. In this case, it does not hurt that they are lagging indicators, because they are used to confirm a *leading* indicator. For this I use an oscillator. It really does not matter which oscillator you use: MACD, CCI, RSI, and Stochastic will all tell you when the market is overbought or oversold, or at least when it is beginning to 'turn.' Of course, they will *not* tell you with any confidence whatsoever, whether the market will actually turn. That confidence comes from the Virgin POC.

I use a stochastic as my oscillator. Rather than using the cross of the %K through the %D line, instead I look at the %K lines on two separate stochastic studies: a very slow one, and a fast one. I use 81 as the moving average for the slow stochastic, and 9 as the moving average for the fast stochastic. When the slow stochastic is above the 65 band, then a cross of the 9 stochastic from above signals a short. When the slow stochastic is below the 35 band, then a cross of the 9 stochastic from below signals a long.

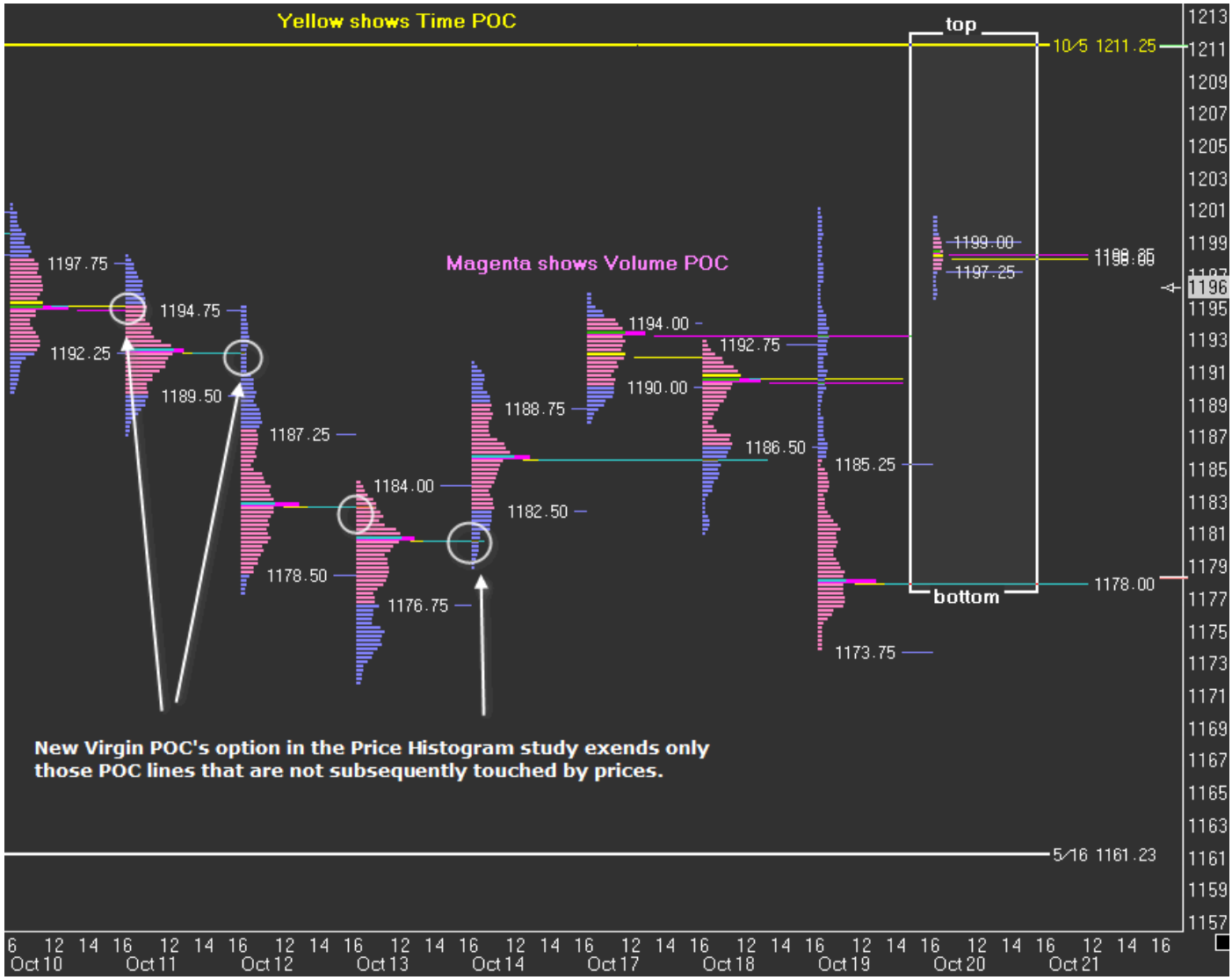
This next chart shows a full oscillation of the slow stochastic, and the buy and sell signals generated by crossed of the fast one.



I have created an Alert Study that places an arrow on the chart and generates a warning sound, whenever the fast stochastic crosses the slow from below and the slow is below 35, or when the fast stochastic crosses the slow from above and the slow is above 65.

To understand how I combine the Virgin POC with two oscillators, let's walk though a trade that occurred recently, on October 20. As with all of my trades, these were posted, and time stamped, to my web site as they occurred.

On October 20, the S&P E-mini opened at 1197.75. The next chart below shows what I call the "Natural Trading Range" (**NTR**): bound by a Virgin POC above, and a Virgin POC below, the open price. It was posted at the beginning of the day, as a sort of "road map" for the trading day. We have no idea whether the market will go up or down. We only know that as prices approach ONE of the two Virgin POC's, that VPC will act as a price attractor and will pull prices towards it. Will prices be pulled all the way to a VPC? Maybe. Maybe not. We may have to wait two days. All we know is that if prices touch a VPC, then look at the lagging stochastic oscillators to confirm trade entry. Our leading indicator, the Natural Trading Range created by the Virgin POC's, tells us we will either look for longs in the 1178 area, or for shorts in the 1211.25 area.

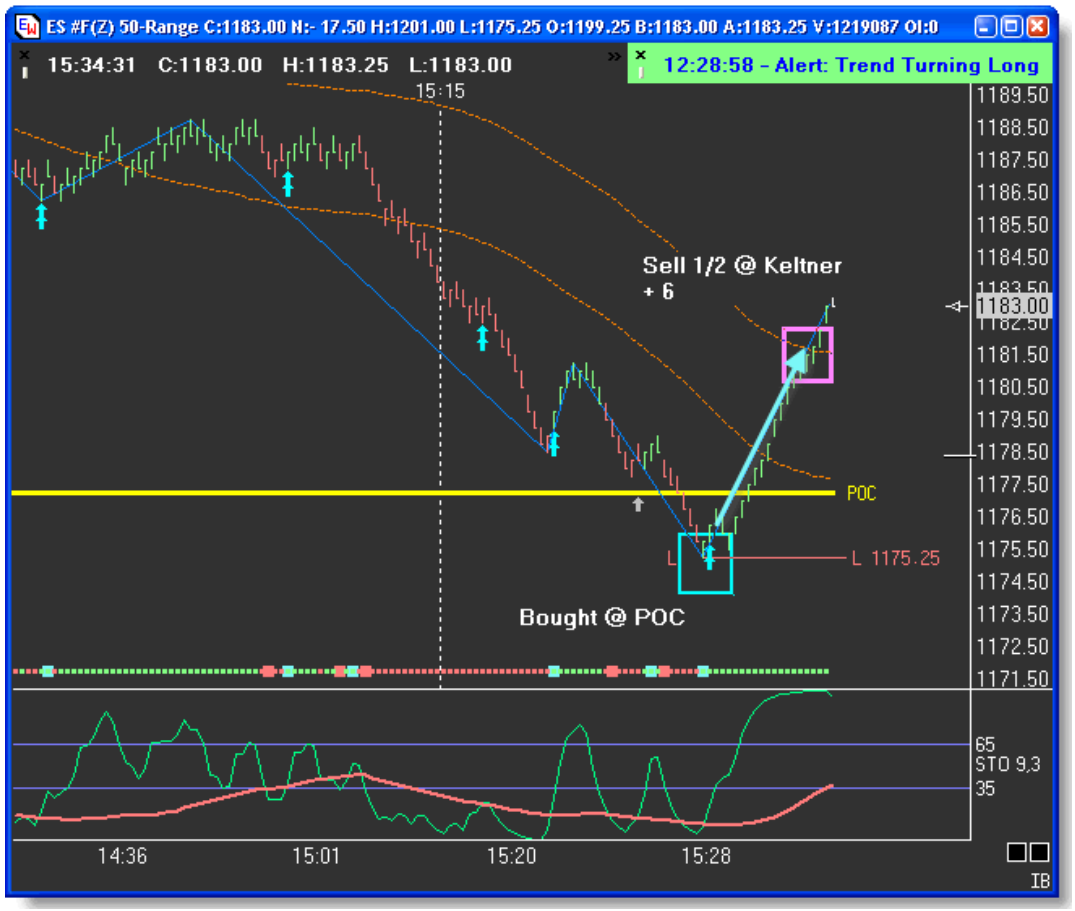


It was not until 3:28 pm that prices finally hit the VPC below. When prices hit the VPC, I did not go long. Instead, I checked to see that the slow stochastic (pink) was below 35. Then I waited for the fast stochastic to cross up. That was my signal to go long. The dotted line shows the intended direction of the trade.

Thursday, 10/20/2005 12:29 Pacific

I tend to be conservative, so I use various trade management techniques. One is to observe the Keltner bands. Keltner Bands are simply a moving average of the average trading range. They tell you when prices are within the average range, and when they are outside of it. For me, it is common sense that when prices move to the other end of the average trading range, I should take at least half of my profit there, as shown below. This was a quick trade; six points in six minutes.

Thursday, 10/20/2005 12:34 Pacific



I then look to exit the remaining amount when the slow stochastic has reached above 65 and the fast stochastic crosses down, generating a sell signal. Note I only use this to exit the trade. I would not take a short unless it was at a VPC.

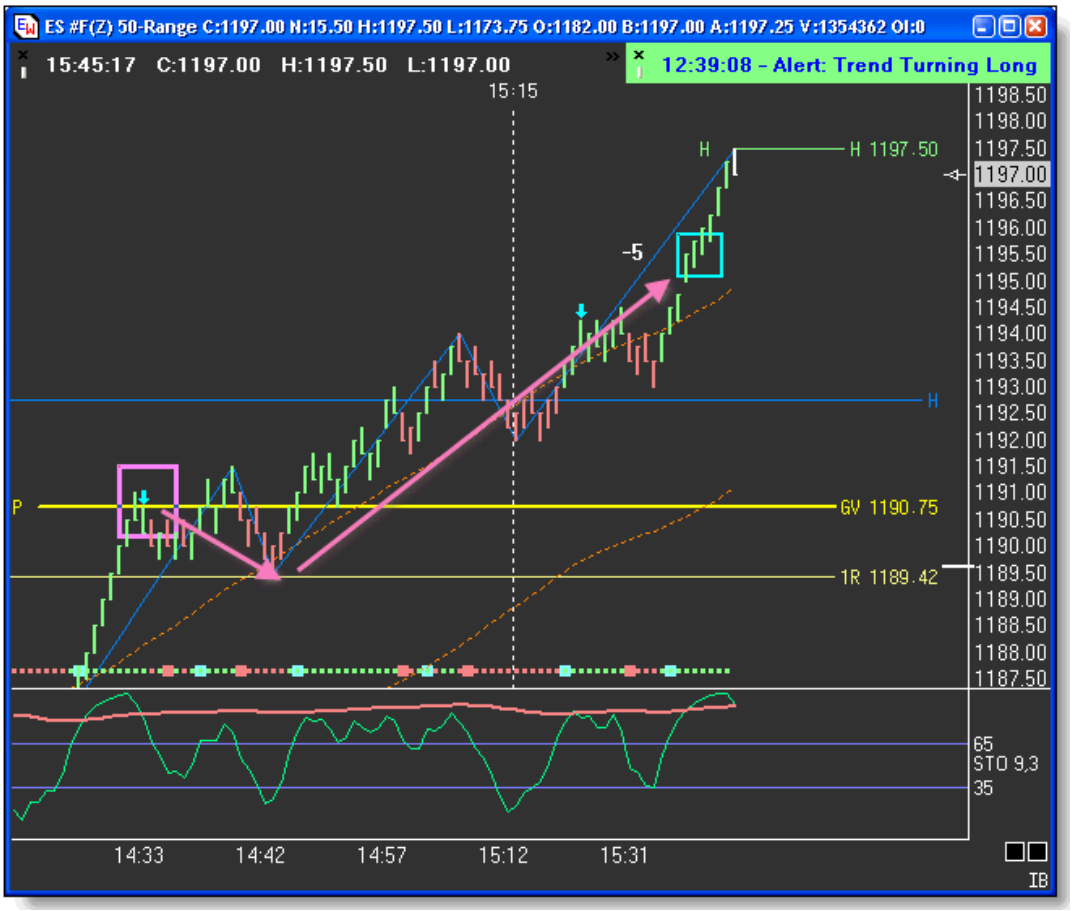
Trade management is also important. Once I take a profit on the first half at the Keltner band, I will move my stop to break-even. The following trade illustrates how the break-even stop comes in handy:

Friday, 10/21/2005 6:54 Pacific

Exited remainder at break-even (stop)

That is the Universal Method, in a nutshell. Of course, the astute trader will employ judicious trade management. It pays to keep a record of all trades, and not just the trades, but what happens during a trade: the high point and low point, as well as the time of day, the Keltner band touches, and anything else that is relevant. With this information organized in a spreadsheet, you can optimize both your stops and your targets. You can also determine which times of day are most effective, and when not to trade. You can also determine whether certain days of the week are less effective than others. Knowing where the optimum stop lies is very important. Here is an example of the practical application of this knowledge:

Wednesday, 10/19/2005 12:45 Pacific



Article by Michael Jardine

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