

Tigertron Pivots

Why Pivot Points Work

When I first came across Pivot Points, I thought there was some secret formula associated with them because it seemed they could magically and accurately predicted turning points and pauses in rallies. After some research and study I discovered the truth is they are used by almost all traders and don't predict but instead mark on the chart where traders will take profit or exit. If you came to Earth from another planet and observed cars on the street you may think that traffic lights held some magic power to predict when cars would stop and start. We know that the traffic lights are signals, and we people operating the vehicles, use them to keep traffic flow orderly. Similarly, Pivot Points don't predict turning or stall points but instead identify prices where traders will adjust their positions. Pivot Points (also PP) are signal points of where to adjust the trade.

How Pivot Points Work

PPs started out with floor traders who needed a line in the sand to determine whether a market was bullish or bearish. It's a simple arithmetic calculation and could be done with pencil and paper. Then, if the market is above the pivot point you are bullish and below you are bearish. S1 and R1 would be your targets. The actual math will be detailed later but basically it's an average of the high, low and closing price of the day. The S1-S3 and R1-R3 levels are then calculated from the Pivot Point. Since Forex is an international, 24 hour market the start of a day could really be anytime. Currently, almost everyone agrees to use New York market close or 1700 Hrs EDT. This is a logical time. All major markets are closed for the day, New York being the last one. It is also the time when most swaps are calculated and settled and is the last hour on Friday of the trading week for all markets, including futures and equities.

Now when I say almost everyone agrees on 1700 EDT, I am talking about major traders like banks and hedge funds. These are the market movers, the smart money. We want to know what they are going to do so we can ride their coattails so to speak. That said there are some professional platforms that end the day at midnight EDT and that is another end-of-day time to consider.

There are other levels that work the same as PPs. Sweet Spots or Psych Levels are the round numbers that retail traders supposedly use as stops. I'm not sure how true that is because it is widely known as the #1 trader mistake. I consider them as another PP. Then there are Fibonacci Pivot Points. Many traders prefer them. The truth is the math comes out to almost the same as Traditional PPs. Still a large enough minority use them. The High/Low of yesterday and the prior day are always big resistance and support points. Other points are weekly and monthly PP and mid points between pivots along with the 50% retracement of yesterdays range. All minor but when they overlap main PPs they are considered a "confluence" and add to the strength.

In my opinion, if you are not looking at PPs on the market you are trading you are missing half of the picture. No matter what strategy you subscribe to it would be wise to have PPs on your chart.

Tigertron Pivots – The Indicator

I developed this indicator mainly for myself. I thought it came out nice and decided to share it with the world in the Forex Factory forum. Other PP indicators I had used all seemed to lack one feature or another and none really looked clean on the chart. My biggest gripe was with the start hour. I was using a broker that started the day at midnight and I wanted to calculate the PP from 1700 EDT. All the indicators I found would only use whatever time the broker called end-of-day. One thing led to another and this indicator came to be.

Features

- Ability to calculate PPs using any time zone and start at any hour
- Mid PPs can be drawn
- Weekly and monthly PPs can be drawn
- PPs for 3 days are drawn and SRs for two days are displayed
- The indicator will automatically adjust for your time zone
- Traditional and/or a Fibonacci style PPs are selectable
- Dynamic sweet spots also called psych levels
- A daily candle can be overlaid
- Previous day High/Low and Yesterday High/Low
- 50 % of yesterdays range can be shown
- Two simple moving averages based on daily prices
- Global Variables for export to other EAs , scripts or indicators
- The ability to turn on or off any of the lines except the PP
- Complete control over colors and line styles

Now let me go through each of the features and explain them in more detail.

Traditional Pivots

Traditional pivots are calculated using the formula:

$$R3 = H + 2 * (P - L)$$

$$R2 = P + (R1 - S1)$$

$$R1 = 2 * P - L$$

$$P = (H + C + L) / 3$$

$$S1 = 2 * P - H$$

$$S2 = P - (R1 - S1)$$

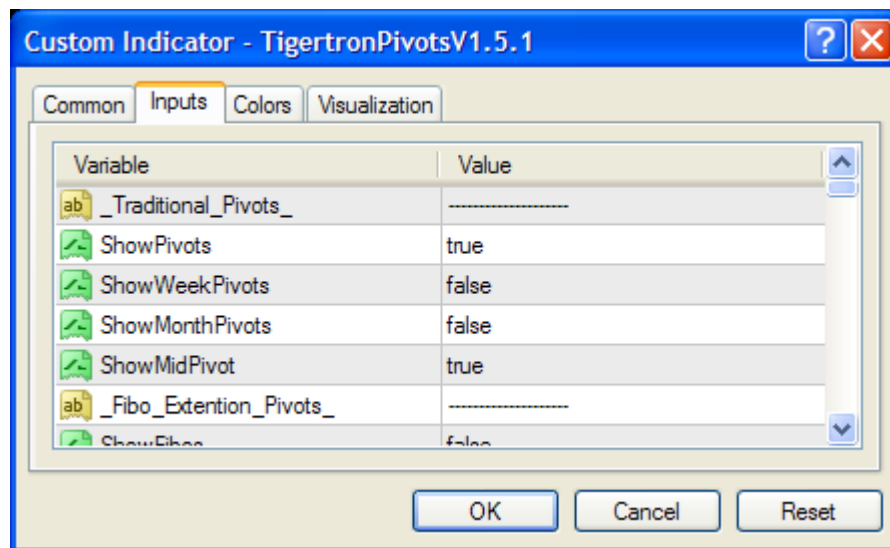
$$S3 = L - 2 * (H - P)$$

The High, Close and Low are based off the highest high, lowest low and close of the 24-hour period you define as a day. Normally, 24 hours starting at 1700 Hrs EDT.

Weekly pivots are calculated the same way only using HCL of a week period. Same thing is done for monthly.

Mid pivots are just the half way points between the main pivot lines.

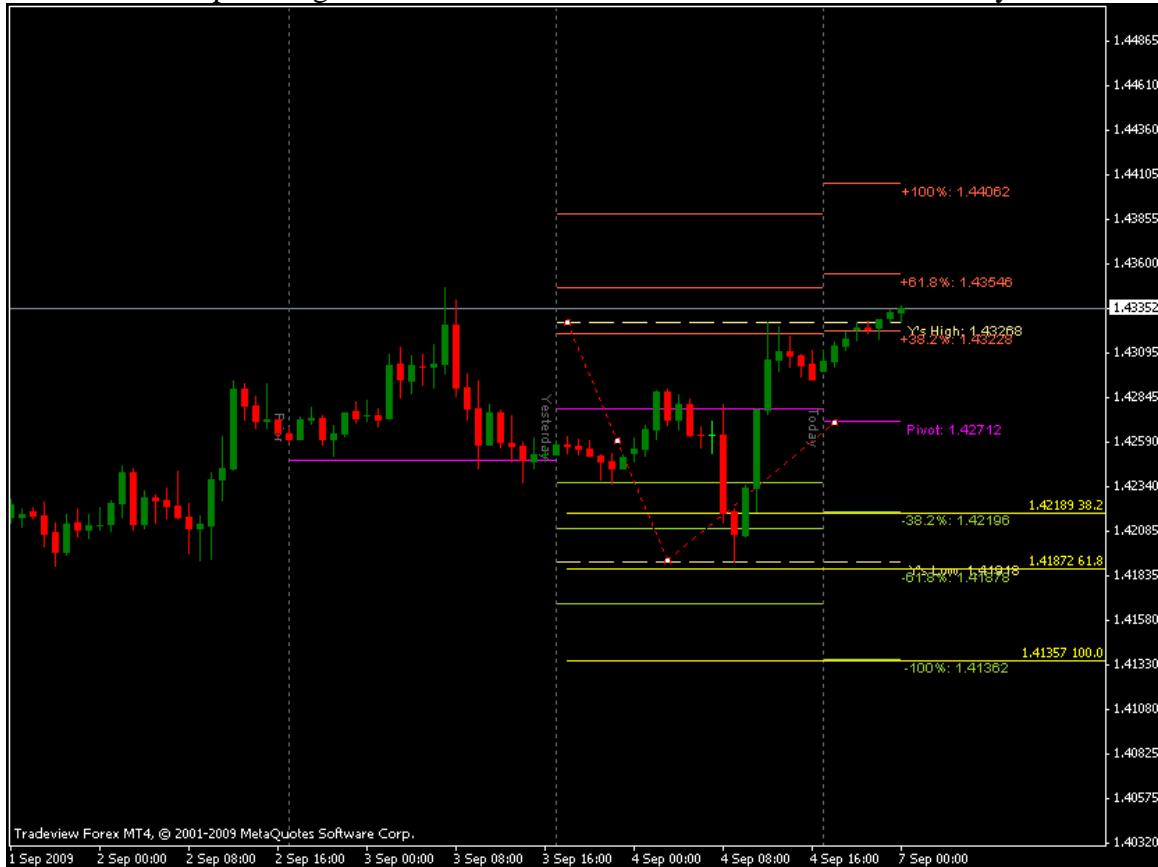
Any or none of the lines can be displayed. The actual Pivot Point will always be displayed and can not be turned off unless you change the color to none. But why have the indicator at all if you don't want the PP?



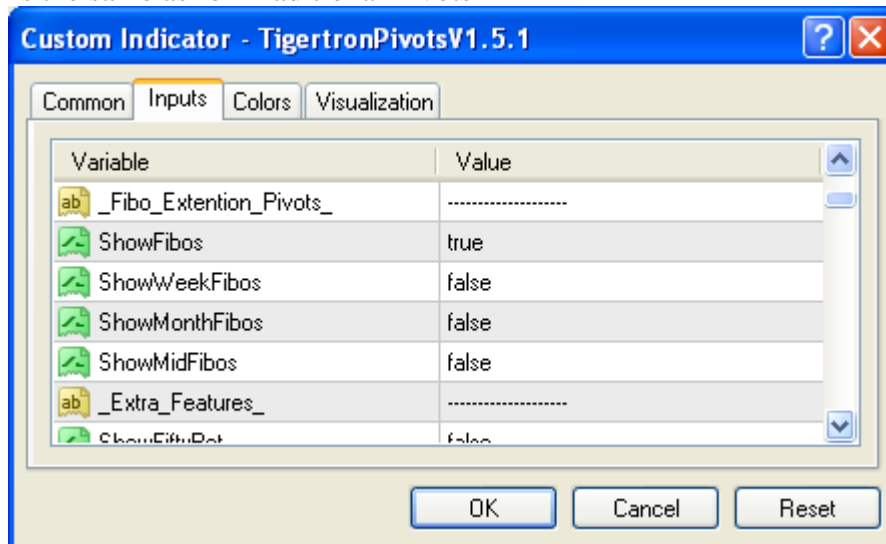
Fibo Extension Pivots

Fibonacci Extensions are Fibonacci levels of yesterdays high and low and then extended up and down from today's pivot point. The levels are 38.2 % 61.8% and 100%.

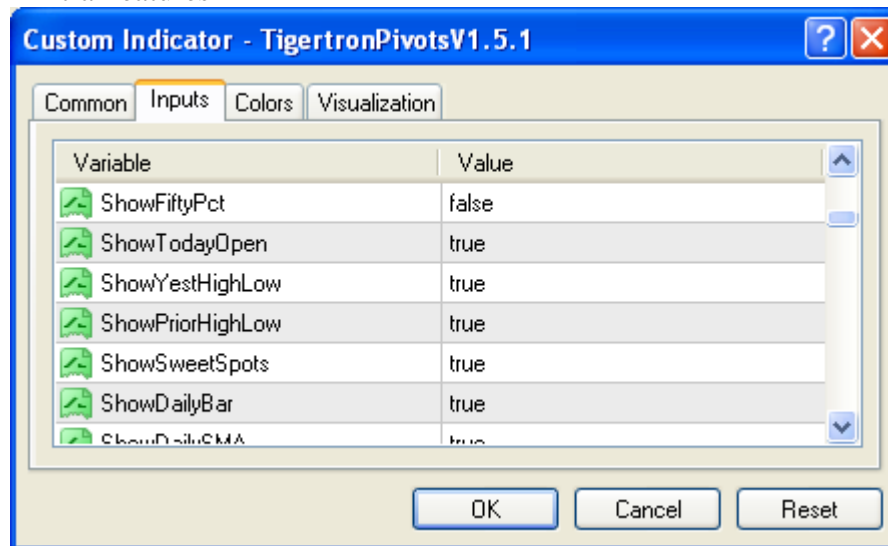
Here is an example using the Fibonacci Extension tool in MT4 overlaid on my indicator.



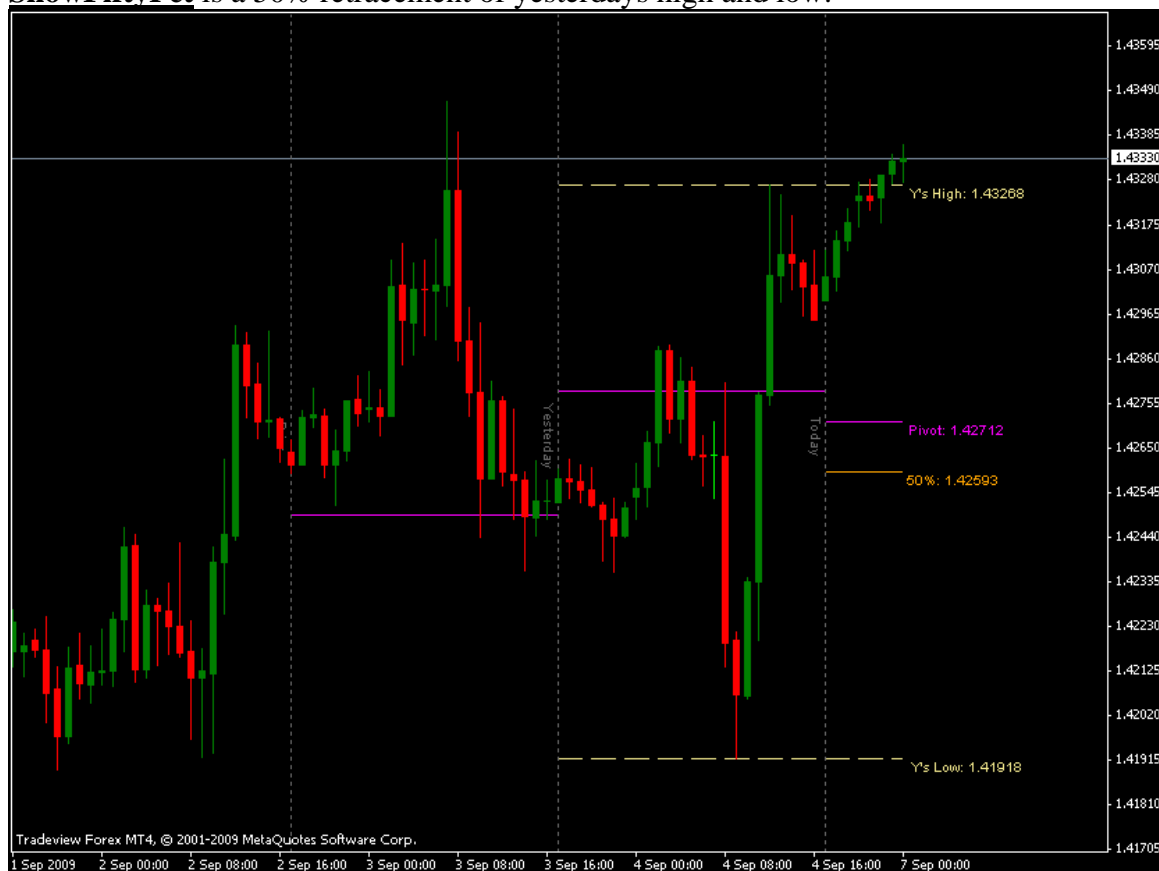
The setup is the same as for Traditional Pivots



There are “Extra Features”



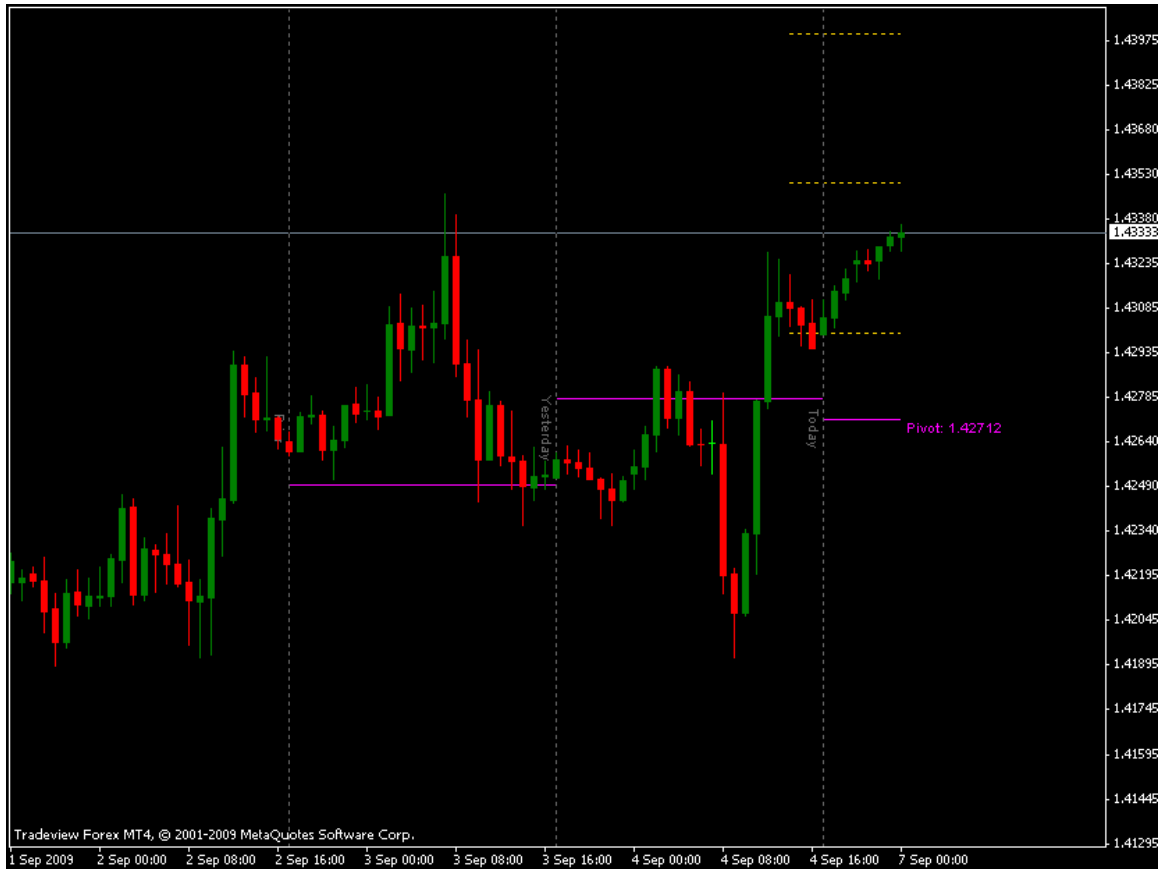
ShowFiftyPct is a 50% retracement of yesterday's high and low.



ShowTodayOpen, ShowYeserdayHighLow and ShowPriorDayHighLow are self explanatory I think.



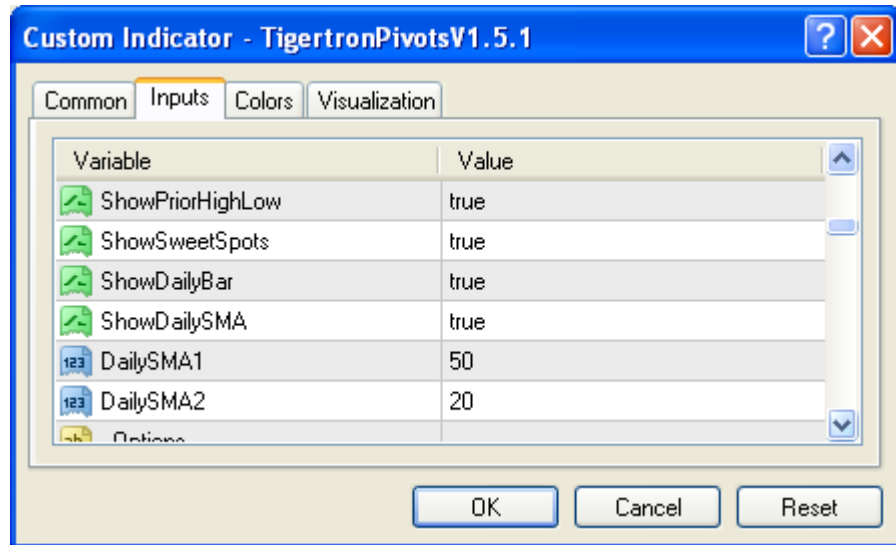
ShowSweetSpots refers to the round numbers that retail traders supposedly use as stops I feel they represent another stall or reversal point. The lines will dynamically change as the market moves so there is always a line representing a round number above and below the market as well as a line that is half way between these points.



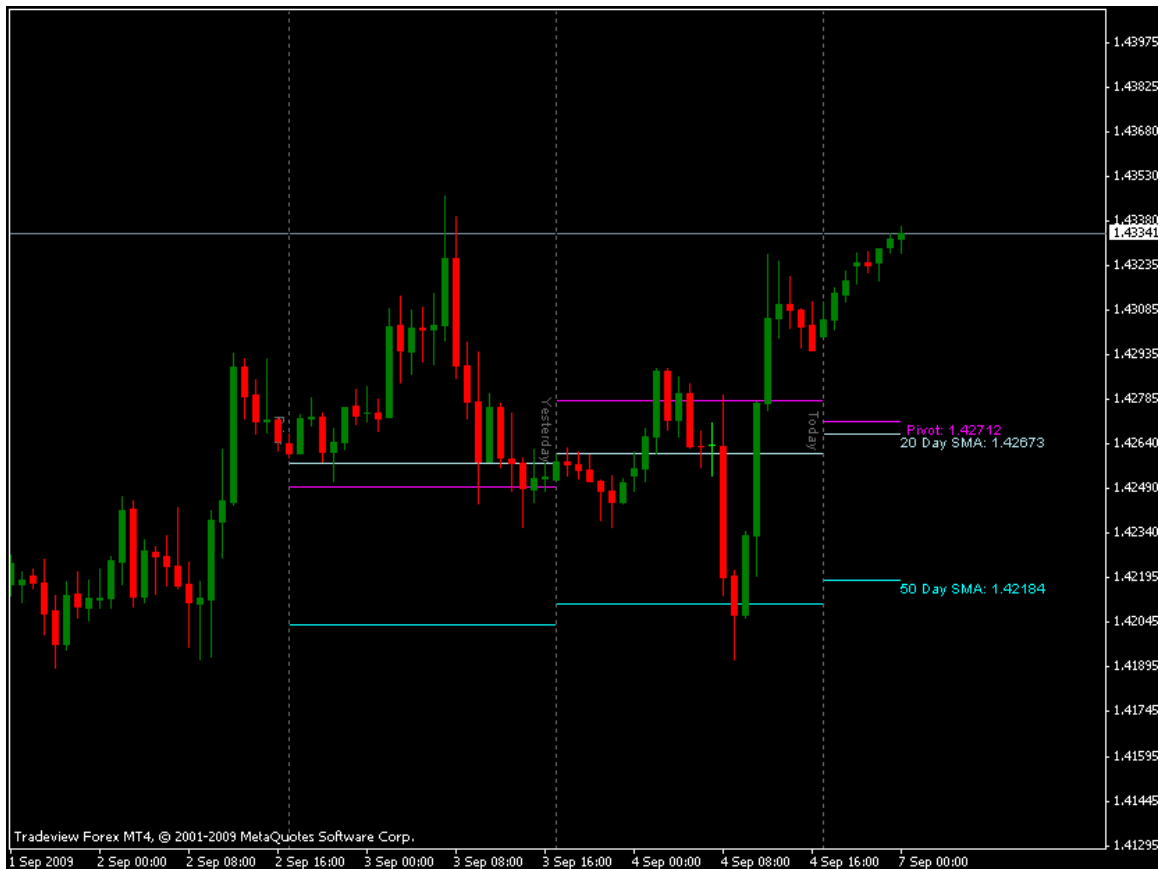
ShowDailyBar is a representation of four days price action represented as candles and then overlaid at the end-of-day time. Today's candle is dynamically drawn at the zero bar and may overlap yesterday bar until there are four bars between the zero bar and yesterday's end.



ShowDailySMA refers to two Simple Moving Averages that are calculated using daily timeframe data, not the timeframe of your chart.



The default is a 50 day and 20 day SMA.



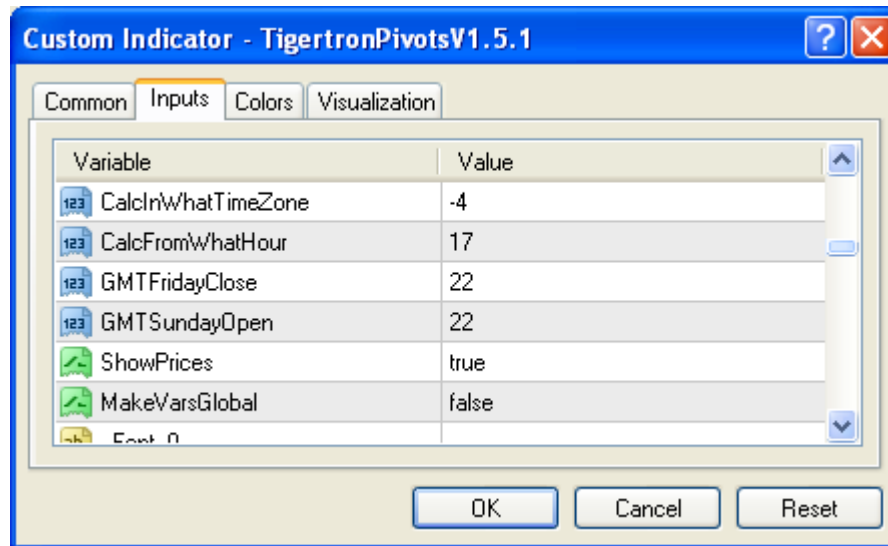
Here is how they look on a daily chart with a SMA of the same time period drawn as a line.



It maybe difficult to see but the line connects one day to the next and my level represents the value for the start of that day.

Also when compared to the previous chart the days will be different because of how D1 bars are drawn. They are created from when the broker identifies start and end. On a D1 chart I call bar zero today, bar one yesterday and bar three the prior day.

Next we have the options for the indicator.



I made the indicator self adjusting for the most part. The only reason that DLLs must be enabled is so that I can access your computer clocks time zone information. If it is set correctly I can then figure out what GMT is. From there I know what your brokers offset from GMT is. Broker time is the time at the bottom of your charts.

CalcInWhatTimeZone is the GMT offset for what ever time zone you wish to do you PP analysis in. -4 corresponds to EDT or New York time zone. **CalcFromWhatHour** then corresponds to the hour you wish to start your 24 hour analysis from. 17 would be 5pm.

So, once I know what GMT is I then know what the GMT offset is of your chart and I can then do the calculations from whatever **CalcInWhatTimeZone** offset you chose.

Just remember this is the offset for that region not the offset for your location. So by moving your computer from one time zone to another the calculations should be able to self adjust as long as your computer clock is set correctly to your local time zone.

GMTFridayClose and **GMTSundayOpen** are cheats on my part because of the complexity of calculating those numbers automatically. The numbers represent hours in GMT that the market opens and closes for the week. I am still very confused as to the true market hours. There are plenty of contradictions on the web and among brokers. So for now just change them as you see fit. Their purpose is to stop the clock over the weekend so that the PPs are not constantly being changed. They are also used in identifying short days if your broker time starts on Sunday.

ShowPrices turns prices on and off for the various line levels.

MakeVarsGlobal causes all prices to be made available to other EAs, scripts and indicators. It is mainly a feature for programmers and I will be offering some “modules” that exploit this option as well. I think I will have to document it separately because of the technical nature.

Following these are entries in the inputs that allow you to change the font size, colors and line styles to your preference.

The very last item is **Debug**. Enabling that displays comments that allow me to troubleshoot the indicator. If you turn it on you can get a glimpse of the inner workings of the indicator.

Caveats

There are a few issues that are beyond my control. Mostly it was with the H4 chart. If you ever get the chance to compare H4 charts from one broker to another you will see some big differences. It all stems from the fact that a 4 hour candle can span over an hour that you wish to calc from, the **CalcFromWhatHour** variable. Set this at 17 a 4 hour candle will start at 1600 hrs and end at 2000 hrs. With 17 in the middle of it. I was going to just not allow H4 charts but that seemed too cruel. So instead I use the data from the M1 chart to do all my calculations and then transfer that information to the chart you have displayed. That fixed that problem but created another one.

In order to do three days worth of pivots I need four days worth of data. In 1 min bars that is about 6000 bars. MT4 will only load in 2048 bars when a new pair is loaded. If less than 6000 bars are detected a message will show in the upper right corner as a reminder that the indicator will be operating with reduced data.

If less than 6000 bars are loaded you will need to load the bars in for the indicator to display correctly. I have made a separate document covering how to do this. It is also attached to the end of this document as an appendix.

Another issue is that it takes time for the data to load from your broker's server and it takes much less time for the indicator to do its calculations. V1.4 would hang when this happened. V1.5 should not. If a certain amount of time passes it will just continue on with whatever data it has, this can create display problems. The only way I know to solve it is to click between time frames until the data is indexed and the indicator displays correctly. Once the 6000 or so bars in M1 are indexed the indicator will function smoothly even after the platform is closed and reopened.

Disclaimer

First and foremost don't use this indicator for trade signals until you are certain it works as you expect. I tried to check everything but as readers of the thread on Forex Factory where this indicator is posted will note, I miss stuff. So check it out for a week or more on your platform, with your broker, using the pairs you wish to trade. Double check the values against your own calculations or the ones supplied by www.actionforex.com it is your responsibility to verify the data and I offer this indicator free of charge, as is, without warranty or obligation expressed or implied.

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Appendix

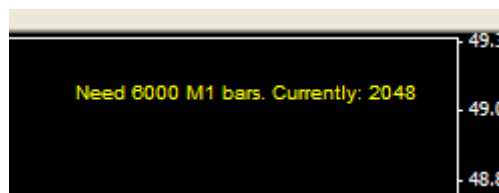
“The indicator doesn’t look right. What’s wrong?”

If you have loaded the indicator onto a new pair that has too few bars it can cause the lines to look strange.



I am not sure why but MT4 will only load 2048 bars whenever a new currency pair is loaded. My pivot indicator needs to have about 6000 M1 bars loaded to display everything correctly. The current version, V1.5, will display what it can even if there are less than 6000 bars although 2048 is a sufficient amount to display pivots for today.

If there are less than 6000 M1 bars the indicator will display a message in the upper right corner stating the bars are insufficient and how many are detected. If there are more than 6000, the message will not display.



In order to get all lines and prior days to display correctly you will need to have MT4 load them. There are a few ways to do this. Method 1 would be to wait three days and the bars will be loaded real time.

Method 2:

If there is less than 6000 bars switch to the M1 timeframe and hold down the HOME key for a while until the message disappears. HOME takes you to the first bar and then loads in some more bars from the server. Keeping HOME held down moves you to the new first bar and more bars are loaded.

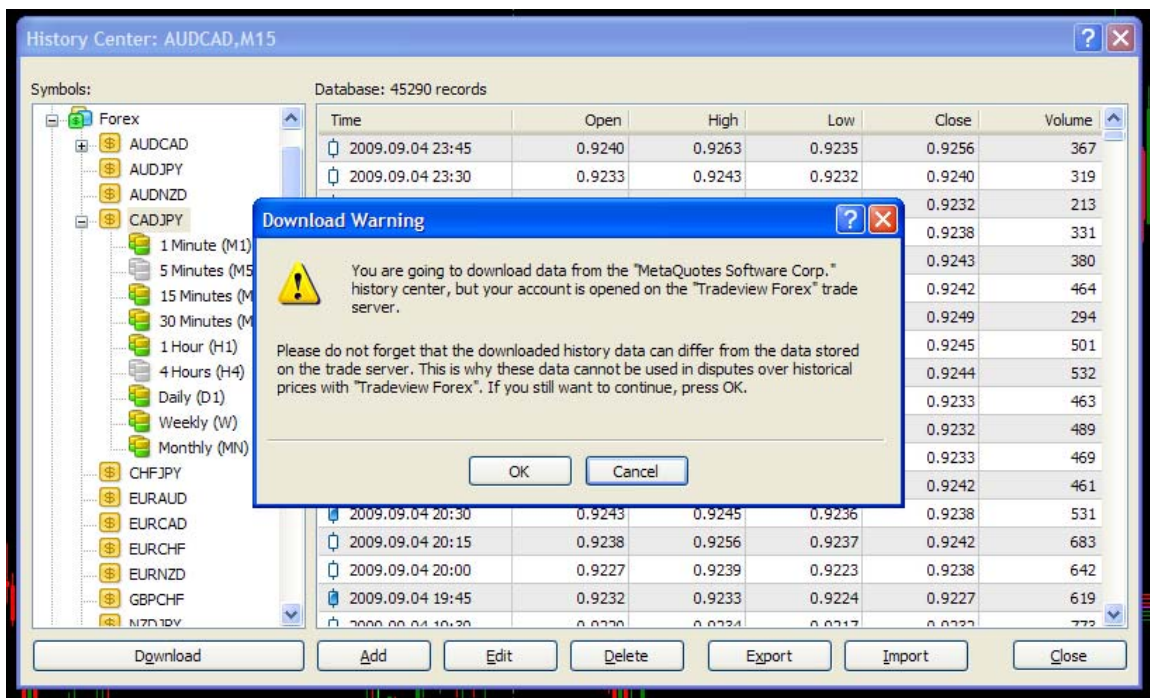
I have found at least one broker that does not provide more than 2048 bars. It is a demo account and I would hope they provide more on their live server. With that situation you are stuck. Try another broker.

Once the bars are loaded, you can switch timeframes and the indicator should adjust correctly. If not try switching timeframes again. As the bars are accessed, the indicator could do its calculations before the data is fully loaded and incomplete data will be used in the calculations. Once the data has been accessed and indexed by MT4, the indicator will function smoothly.

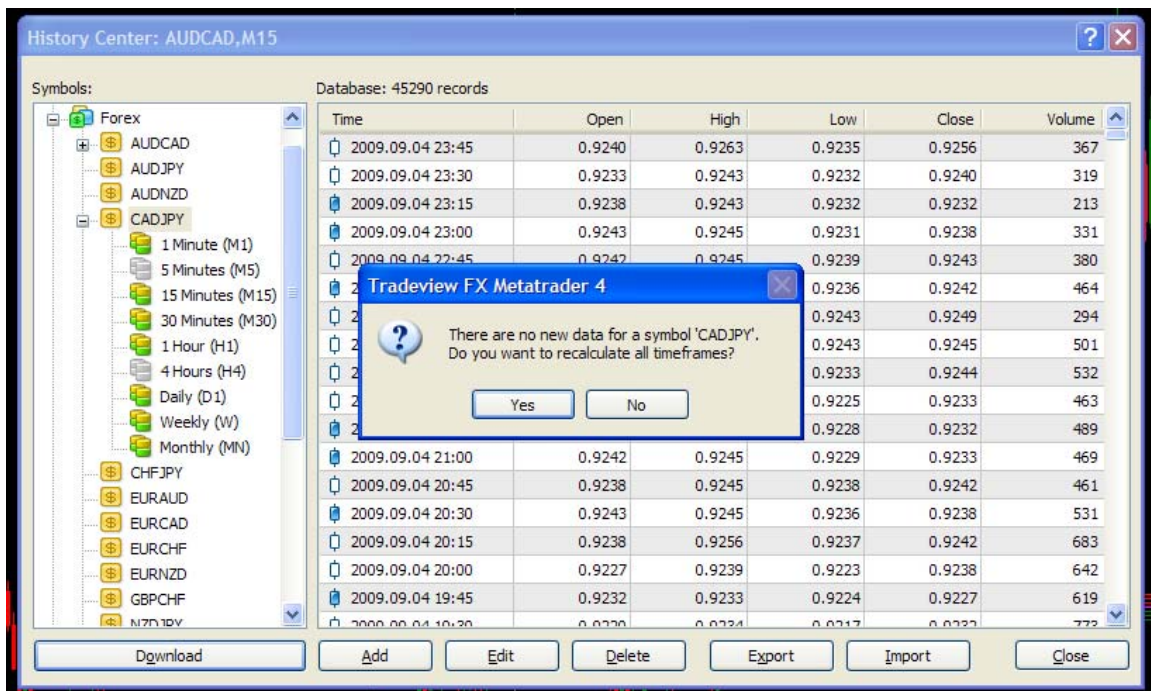
If you still have problems...

Method 3:

Press F2 and the History Center will pop-up. Select your pair and click Download in the lower left.



Hit OK and a progress bar will appear. After the data is loaded do it again. It will quickly jump to this alert.



Click yes and try the indicator again. You will still need to change timeframes a couple times to get the data indexed.

One of those methods should fix any abnormalities. If not PM me and I will see if I can figure out why.

I know this seems clunky but I cannot find any other way to get MT4 to load data. If someone knows a better way please let me know.

Again, this is only required when accessing a pair for the first time. Any pairs you watch on a regular basis should have plenty of bars loaded.

If the indicator still looks wrong, try switching timeframes until the indicator looks good. You may have to wait a few seconds while the data indexes.

Tony
Aka Tigertron