

[Welcome to the Sundial Systems section of James16's teaching forum!](#)

Hi everyone!

My name is Charles, and though I prefer to be called "Dial" or "Diallist", please feel free to call me whatever you like. (Within reason. 😊)

James16 has said that the system I'll be teaching here, while publicly available, is hard to get information on, and some assistance is needed to learn to trade it. Some parts of the system *can* be a little confusing, especially for new traders. But don't worry! I shall be explaining each part of the system in detail. And if that isn't enough, please feel free to ask questions in the discussion thread.

The system I will be teaching is based on a trading model developed by a group of three traders who call themselves the Vegas Team. The trading model that they developed can be used to create a wide variety of trading systems.

Since this system is derived from that model, and is not the model itself, I've given it the name ***Knife***. I've chosen that name because this system can be used to carve large numbers of pips from the market. It can also carve large chunks of equity from your account if you do not have discipline and good money management skills. The Knife is a powerful system, but that power can work for you, or against you.

[Acknowledgements](#)

I would not be as proficient and profitable with this system as I am if it had not been for the generosity of a group of several dear friends who helped me learn this system and went out of their way to answer all my incessant questions. Unfortunately, as much as I want to acknowledge each of them by name, they have requested that I not do so. Therefore I shall simply call them "Team Aphid", a fictitious name that will have meaning for them so that if they ever read this introduction, they will know how very grateful I am for everything they have done and continue to do for me. I truly wish that everyone in the world were as kind and giving as the people of Team Aphid.

Thanks Team Aphid!!!

[The Knife is *not* a 100% mechanical system.](#)

While I believe the Knife can be traded profitably as a purely mechanical system, I believe doing so is emotionally difficult. This is especially true during trend changes, when the Knife is most vulnerable to losses. I think the Knife is probably 90% mechanical, and 10% discretionary. In addition to using a little discretion to reduce losses, application of discretion can also enhance profits. I will be clearly explaining the mechanical rules of the Knife system. But, you will receive discretionary comments from myself and other subscribers in the discussion section. Use of discretion is an art which can be refined with practice and experience. Just one more reason to demo trade this system until you are fully confident in the use of it.

[Technicals](#)

For the benefit of new traders, when I say "technicals" I am referring primarily to Support/Resistance, Trendlines, Pivot Levels and Fibonacci Retracement Levels. In addition to these fundamental technicals, I believe that the Price Action lessons you

will be learning in James16's section of the forum will prove to be a very valuable enhancement to the Knife system. It is my hope that as you and I post our demo trades to the discussion thread, that James16, will come in from time to time and point out Price Action that either reinforces, or opposes the Knife's signals. Learning Price Action will only enhance your ability to apply discretion to the Knife and thereby increase your profitability.

The Knife's Personality

Some of you will have never seen a system like the Knife before. Since it is most likely outside your experience, especially if you are a new trader, it is essential that you demo trade the Knife long enough to get a feel for it's personality; how it reacts to changing market conditions; and how it behaves with different currencies. Please do not trade the Knife with real money until you have demo traded it long enough to learn the nuances of it's personality.

Student Participation

I'd like to suggest that you think of this forum as a college classroom. Student participation is highly encouraged. I will be posting my trades with comments. If you choose to follow along in your demo accounts, I hope you will post your trades as well. That way, each of us can learn from the others. Each of you brings a different level of experience to this forum. We can each learn from one another whether experienced or newbie. When I post my trades I will also post any mistakes that I make so you can learn from them. I hope you will be willing to do the same. If you have an idea for improving the system, by all means post it! All of us can then discuss the relative merits of the idea. If everyone contributes, the Knife will improve; your skills at trading the Knife will improve; and your profits should improve as a natural result.

My Role in this Forum

Of all the instructors in the James16 group, I have the fewest years of experience as a trader. I consider myself to be a good trader, but I am still learning, as we all are, and by no means do I consider myself an expert trader yet. That is a goal that we all have in common. I am further down the trading highway than some of you, and further behind others of you. I don't have all the answers, no one does, so I if I don't know something, I'll say so and try my best to research a good answer for you. In any case, you have my promise that I will never blow smoke in your faces.

I have structured my section of the James16 group so that it targets less experienced traders. The discussions we will have in the Knife Discussion thread will be a learning experience for all of us. Why do I say this? I was a technical instructor for several years and taught a variety of classes in industrial electronics. My students were bright, intelligent and motivated, just as you are. Regardless of how many times I had taught a particular class, I always learned something new from my students because each of them brought with them a perspective that was different not only from my own, but from the other students as well. Our class discussions were mutually beneficial not only to the fellow students, but also to myself. I expect to have the same experience in my interactions with you. So come on all you sharp people! Show me your best stuff!

Demo! Demo! Demo!

I have said these things before, but they are so important that they bear repeating.

Please DO NOT trade live with real money until you have demo traded the Knife extensively. I recommend a MINIMUM of three months of demo trading before even thinking about going live. Please allow yourselves time to learn the Knife system. Get familiar with it's personality, tendencies, quirks and deceptions. Remember why I call this system the Knife. Yes, it can carve large profits from the market, or it can hack your account to pieces. I say again Demo! Demo! Demo! a minimum of three months or for as long as it takes for you to become consistently profitable with this system on a demo account.

Personal Responsibility

After you have demo traded the Knife extensively and you have become confident that you are ready to trade it live with real money, please remember one thing. YOU are responsible for your decision to trade with real money. If you decide to trade live before you are truly ready, and you lose money, the responsibility for that will rest on your shoulders and no one else's. I hope that everyone is mature enough to take responsibility for their own trades and the results of those trades.

System Viability and Longevity

The Vega Team believes the model for this system will continue to perform well for many years to come. I share this belief, however, I must impress upon you that this is just the opinion of the model developers. Any system is subject to degradation of performance if market behaviour changes significantly. Some systems have been working for years, other systems work for a time and then die, and some systems that have died are occasionally resurrected. The Knife system is not immune to this. I believe this system is powerful, profitable and will work for many years. But I urge you to keep in mind, as I do, that anything could happen. The reason I am stressing this is simply because it is due diligence. I want you to be aware of these factors, so that if you choose to trade the Knife, it will be the result of a fully informed decision for which YOU AGREE to take full responsibility.

One-On-One Support

You may occasionally want or need to discuss something privately. In that event, I need you to do something for me. I would like you, as subscribers, to address private questions and concerns to me via email. Please do NOT Private Message me. That way, I'll have a record of our correspondence and I won't have to spend so much time backing up my PM log before deleting PM's. This will also leave my PM free to answer the questions I get from non-subscribers on the public forum. Thanks for your help with this.

My PF email address is diallist.pf@earthlink.net

Please don't share this email address with non-subscribers. I've set it up just for your use.

Now to Begin

Start with the thread entitled "**Chart Setup and Overview**", then move on to the thread entitled "**Knife System Description**" for an in-depth explanation of the system.

Disclaimer

Nothing that I or the other instructors in this training forum say, shall be construed in any manner as trading advice or a recommendation to take a particular trade. All trading decisions, and the outcome of such decisions are the sole responsibility of the subscribers to this forum. Due diligence on your part is NOT an option, it is a requirement.

Basic setups before we begin

Before getting into the details of the Knife system, I'd like you to set up your charts. Pick a currency, say the GBP/USD, and open a weekly chart and a 4 hour chart. I recommend using Open-High-Low-Close (OHLC) bars rather than candlesticks as that is what I'll be using. If everyone will use OHLC bars when posting their charts in the discussion thread, I think it will make things easier for everyone.

On the weekly chart, set up the following two moving averages:

A 21 period Exponential Moving Average (EMA) on the median price.
The median price is the high of the bar, plus the low of the bar, divided by two.
 $(H+L)/2$

A 5 period Simple Moving Average (SMA) on the median price $(H+L)/2$.

On the 4 hour chart, set up the following two moving averages:

A 55 period SMA on the median price.

An 8 period SMA on the close price.

Overview of the Weekly Chart

The two moving averages on the weekly chart will be used to determine the current trend direction, as well as the strength of the trend. The distance between the two moving averages will serve as a measure of market momentum that will adhere to the following two guidelines the majority of the time.

(1) If the momentum, as measured by the distance between the moving averages increases from one bar to the next, the trend is still in place.

(2) But, when the momentum decreases from one bar to the next, the trend has changed from up to down, or from down to up.

As mentioned, these two guidelines will be in effect the majority of the time. The few times that the behavior of the moving averages does not adhere to these guidelines will be covered in the system description.

Overview of the 4 Hour Chart

The two moving averages on the 4 Hour chart will be used to signal trades, and to determine position size.

When a trade is signalled on the 4 Hour chart, it will only be taken in the direction of the trend as indicated by the Weekly chart.

The crossover of the two moving averages will NOT be used to signal trades. Instead, a change in slope of the 8 SMA will signal trades instead. This has the great advantage of eliminating virtually all whipsaws from the system. Most, but not all of the few whipsaws that remain will be taken care of by a filter on the 4 Hour chart. How this filter is used will be covered in detail in the system description thread.

Two trade signals & two position sizes

There are two signals given on the 4 Hour chart: a primary and a secondary. A detailed description of each of the two trade signals will be given in the system description thread.

For a primary trade signal, the position size will be 3 "Units", and for a secondary trade signal, the position size will be 1.5 "Units". This is because secondary trade signals are not as strong as the primary signal and pose a slightly higher risk. You protect yourself by cutting the position size in half.

A Unit, generally speaking, is one third of the position size that your money management system dictates. If, for example, you calculate your position size to be 12 lots (standard, mini or micro), then the Unit size = 4 lots for a primary signal, and half that for a secondary signal.

One unit will be taken off the trade at the first take profit level, the second unit at the second take profit level, and the final unit allowed to run until a change of slope of the 8 SMA occurs.

Setting of Stops

In general, stops will be determined from the technicals of the last few bars prior to the trade signal. Technicals include Support & Resistance, Trendlines, Fibonacci Levels, and Pivot Levels. In most cases however, you will simply be using the most recent swing high or swing low to set stops. As an alternative to using technicals for stops, I will also present a method for setting stops based on price movement beyond a point that I call the "neutral line". An explanation of how to determine the location of the neutral line is given in the system description.

Taking Profits

Profits are taken at levels determined by Fibonacci numbers. Which Fibonacci numbers are used depends upon the volatility of the currency. In general, the higher the volatility of the currency, the higher the profit levels will be. The first unit is taken off at the first Fibonacci level, the second unit is taken off at the second Fibonacci level and the final unit is left to run until the slope of the 8 SMA reverses direction. Setting of take profit levels will be covered in detail in the system description.

This concludes chart setup and system overview. Please move on to the thread entitled, *"Knife System Description"*.

Knife System Description

This section will explain the details of the Knife system. Key areas to be explained are:

- Profit Potential of the system.
- Use of Fibonacci numbers for trend detection, trade signals and profit targets.
- How it is a momentum system rather than a moving average crossover system.
- How momentum strength and direction are measured.
- How to set up signal generation on 4 hour charts.
- How to set up trend detection on weekly charts.
- Using moving average slope change to trigger trades.
- Use of trailing entries for precision entries.
- Notes on use of discretion.
- Money management.

Profit Potential of the Knife System

The Vegas Team performed a manual backtest of their model from Jan 1, 2004 through June 30, 2005, a period of 18 months. The mechanical rules of the Knife system are almost identical to the rules of the base model. The Knife system only deviates from the model in the Fibonacci levels used for lower volatility currencies; calculation of momentum; and when discretion is applied.

During the manual backtest, the Vegas Team used the following restricting criteria in order to arrive at more conservative numbers. According to the Vegas Team, the numbers shown in the table below are less than what you should be able to achieve. In fact, one member of the team believes that 20,000 to 25,000 pips profit per year is achievable on GBP/USD alone.

- (1)** Any trade of less than 100 pips profit was ignored.
- (2)** Take profit was measured from when the 8 SMA hit the take profit level, rather than when the price hit that level. Since the 8 SMA lags the price, the effect was to REDUCE profitability over time from what the actual profit would have been had they measured from when the price actually hit take profit.
- (3)** After all losses were added up, the Vegas Team DOUBLED them before subtracting them from the profits. The Vegas Team says they did this to cover any stupid mistakes they may have made during the profit analysis.

Please bear in mind that to approach the level of profitability shown below, you would have to be available to take every trade when it is signaled. Please don't misunderstand. This does not mean that every signal must be taken for this system to work. The way I look at it, if I miss a trade, there's another one just around the corner.

Attached Images

Jan 2004 thru Jun 2005					
Currency	Profit (pips)	Loss (pips)	Net P/L (pips)	Avg Month Net P/L	Avg Week Net P/L
GBP/USD	13,000	3,000	10,000	556	128
EUR/USD	8,825	1,275	7,550	419	97
USD/CAD	7,950	2,475	5,475	304	70
USD/JPY	7,000	1,725	5,275	293	68
USD/CHF	7,550	2,325	5,225	290	67
AUD/USD	7,175	2,250	4,925	274	63
Total	51,500	13,050	38,450		
Avg Month	2,861	725	2,136		
Avg Week	660	167	493		



[Fibonacci numbers are the core of this system](#)

Google the phrase "Fibonacci number" and you'll be deluged with more information about them than you'll ever need to know. So, there is no need to repeat that information here. Whether Fibonacci numbers appear in the markets naturally, or whether their almost universal use renders them a self-fulfilling prophecy is a mystery to me. What is not a mystery is their effectiveness and reliability in trading. Therefore the Knife system is based almost entirely on Fibonacci numbers.

The first fifteen numbers in the Fibonacci sequence are given here, with the ones used by the Knife system bolded in red. The use of each of these numbers is defined in the table below.

1, 1, 2, 3, **5, 8**, 13, **21**, 34, **55, 89, 144, 233, 377**, 610

Attached Images

Fibonacci Number	Used For		
	Weekly Chart - Determines Trend		
21	Slow EMA [(H+L)/2] on Weekly Chart		
5	Fast SMA [(H+L)/2] on Weekly Chart		
	Four Hour Chart - Signals Trade		
55	Slow SMA [(H+L)/2] on 4 Hour Chart		
8	Fast SMA [Close] on 4 Hour Chart		
	Low Volatility	Medium Volatility	High Volatility
89	1st Take Profit		
144	2nd Take Profit	1st Take Profit	
233		2nd Take Profit	1st Take Profit
377			2nd Take Profit

Price is attracted to Fibonacci Take Profit Levels

On the chart below (EURUSD) I have plotted the 55 SMA in yellow. I'll be covering the use of the 55 SMA for determining trade signals in more detail later.

For now, the 55 SMA is acting as a dynamic, central reference point from which profit targets are measured. On the chart below I've shown lines 89, 144 & 233 pips both above and below the 55 SMA.

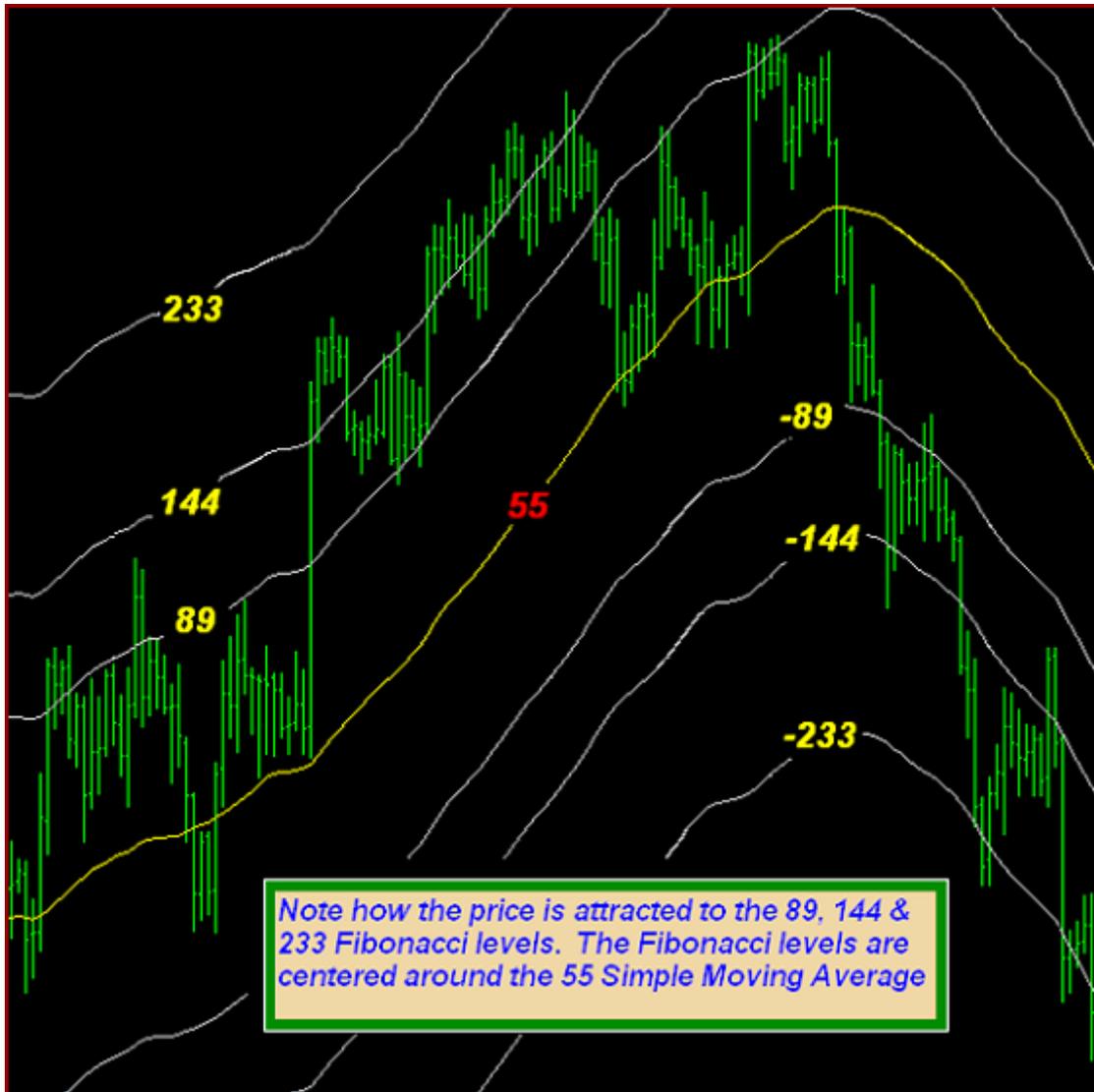
If you look closely at the chart, you will see that there are two basic behaviours exhibited by price towards the fibonacci levels.

(1) Price uses these levels for support and resistance. Note those times where the price just touches the fibonacci curves then bounces off in a reversal.

(2) Price treats the Fibonacci curves as "attractors". It is almost as if these lines have gravity and the price tends to orbit around them. First above, then below, then above, then below.

The common element in (1) & (2) above is that the price is attracted to these fib lines. The operative word is "attraction", which is why these Fibonacci levels are excellent profit targets; the price gravitates towards them.

Attached Images



[How to use the Weekly chart for trend detection.](#)

The weekly chart is used to determine trend direction. This is important to know, since trades will only be taken in the direction of the weekly trend. However, this is strictly true only if you are trading the Knife mechanically. Later on I will be illustrating certain situations where you may wish to be discretionary and trade against the trend indication. This is because the trend indication is lagging and price action will already have turned before the trend indication reverses.

[Set Up of the Weekly Chart](#)

On your currency of choice, open a weekly chart and apply the following two moving averages:

21 period EMA (Exponential Moving Average) of the Median: $(H+L)/2$

5 period SMA (Simple Moving Average) of the Median: $(H+L)/2$

Although these two moving averages will cross, they will not be used as in a crossover system. Instead, for each bar, the price difference between the moving averages will be used as a measure of momentum. The further apart the moving averages are for a given bar, the greater the strength of the momentum.

The 5 SMA will always move faster than the 21 EMA. Therefore, during a trend the distance between the two moving averages will exhibit the following behavior. At the beginning of a trend, the momentum (distance between the moving averages) will decrease until the 5 SMA overtakes the 21 EMA and a crossover occurs. The momentum will then increase with each successive bar as long as the trend continues.

When a given bar's momentum is LESS than the previous bar's momentum, a trend change is signaled.

*NOTE: The previous sentence is a general rule applicable most of the time. However, there are occasions when an **increase** in the momentum will indicate a trend change. I will give an example of this in a later section.*

The following image illustrates the set up of the two moving averages and also shows, via the vertical pink line, how momentum is measured for a given bar.

Trend Change - UP to DOWN

The following image illustrates how a trend change from UP to DOWN is signalled.

I have marked three bars with pairs of colored dots placed on the moving averages. Study the image below and you will see that the strength of each bar is determined by subtracting the lower moving average (21 EMA) from the upper moving average (5 SMA).

In the image below, the momentum of the "green" and "yellow" bars *increases* from 143 to 144 indicating a continuation of the current UP trend.

However, the momentum of the "yellow" and "red" bars *decreases* from 144 to 134. This decrease signals a trend change from UP to DOWN.

Attached Images

Weekly Chart

UP Trend to DOWN Trend

● $1.2546 - 1.2403 = 143$

● $1.2559 - 1.2415 = 144$

● $1.2557 - 1.2423 = 134$

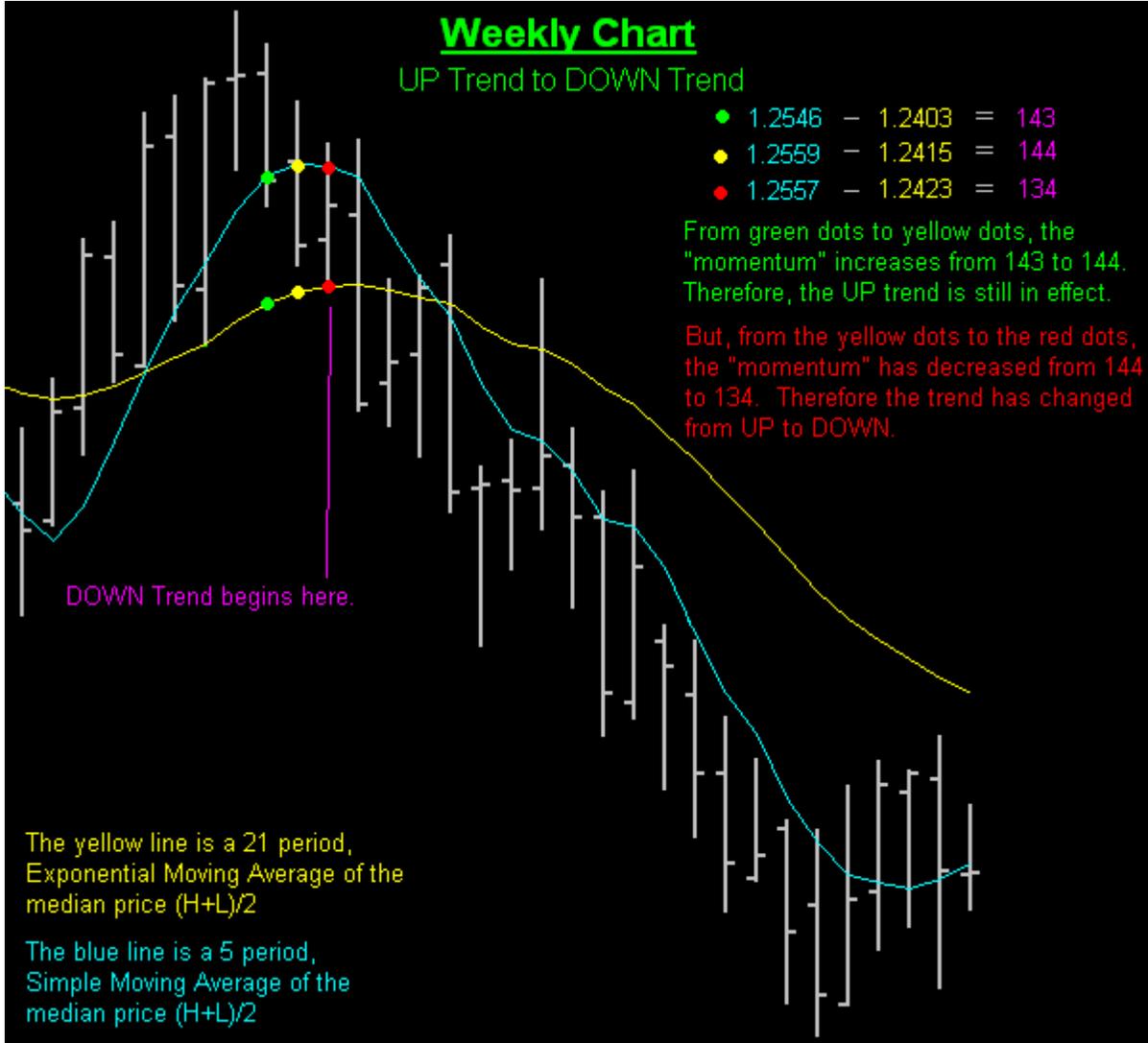
From green dots to yellow dots, the "momentum" increases from 143 to 144. Therefore, the UP trend is still in effect.

But, from the yellow dots to the red dots, the "momentum" has decreased from 144 to 134. Therefore the trend has changed from UP to DOWN.

DOWN Trend begins here.

The yellow line is a 21 period, Exponential Moving Average of the median price $(H+L)/2$

The blue line is a 5 period, Simple Moving Average of the median price $(H+L)/2$



Trend Change - DOWN to UP

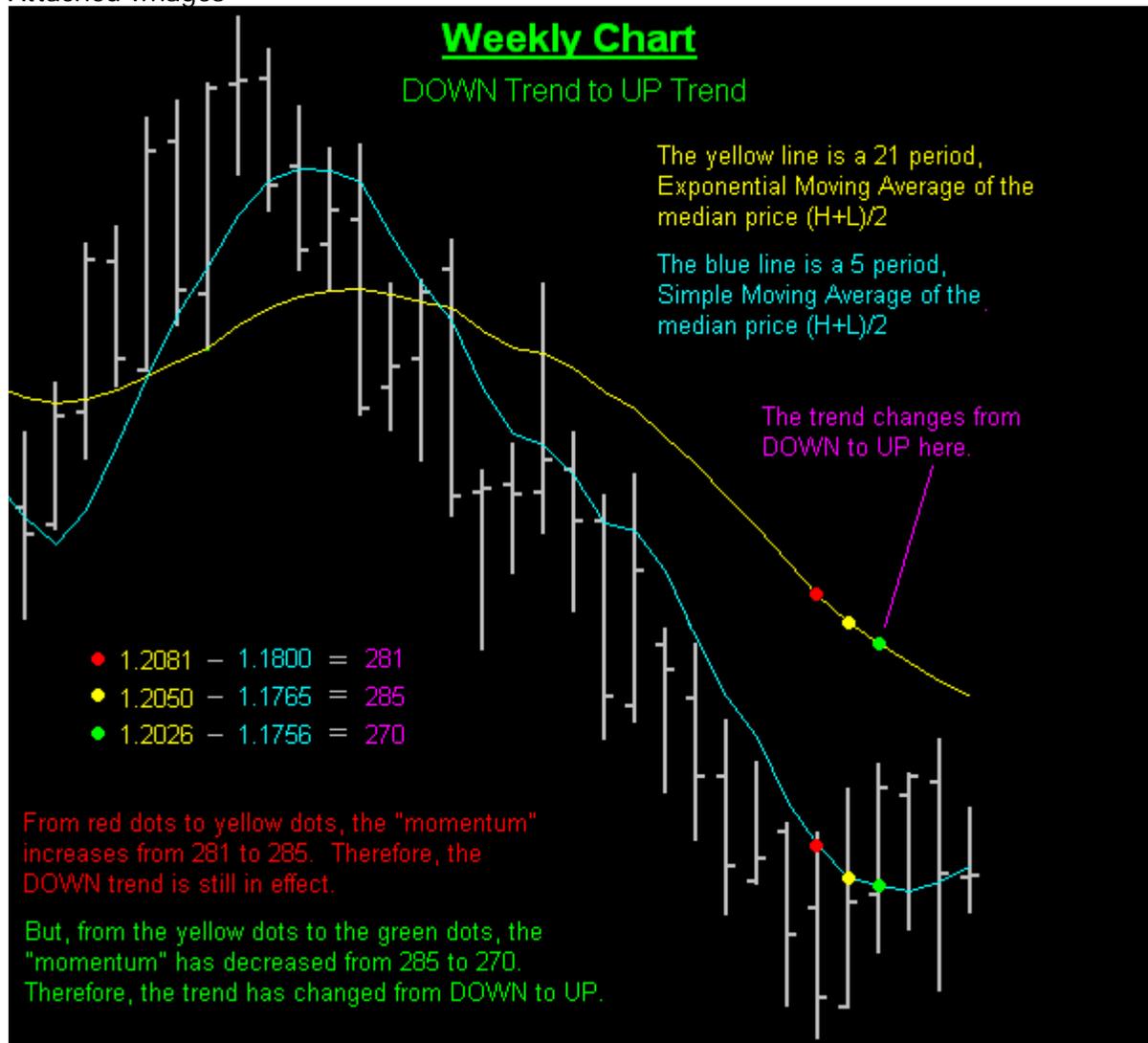
The following image illustrates how a trend change from DOWN to UP is signalled.

I have marked three bars with pairs of colored dots placed on the moving averages. Study the image below and you will see that the strength of each bar is determined by subtracting the lower moving average (5 SMA) from the upper moving average (21 EMA).

In the image below, the momentum of the "red" and "yellow" bars *increases* from 281 to 285 indicating a continuation of the current DOWN trend.

However, the momentum of the "yellow" and "green" bars *decreases* from 285 to 270. This decrease signals a trend change from DOWN to UP.

Attached Images



An Increase OR Decrease in Momentum Indicates a Trend Change

Most of the time, a trend change will be indicated by a decrease in momentum. However on some occasions, an increase in momentum will indicate a trend change. Regardless of whether an increase or a decrease of momentum indicates a trend change, you should start taking positions in the direction of the new trend immediately. You do not wait until crossover occurs. Sometimes, you don't get a crossover between trend changes. And, while most trend changes are indicated by a *decrease* in momentum, there are some occasions where the trend change is marked by an *increase* in momentum.

Here are the two sequences that mark a trend change.

The first is when a *decrease* in momentum marks the trend change, and is the one you'll see most of the time.

The second sequence occurs less frequently and is characterized by an *increase* in momentum marking the trend change.

First Trend Change Sequence

1. Momentum continues to increase from week to week indicating the current trend is still in place.
2. Momentum decreases from one week to the next indicating a trend change has occurred.
3. Momentum continues to decrease until a crossover of the 21 EMA and 5 SMA occur.
4. Crossover Occurs
5. Momentum begins to increase following the crossover.
6. The next decrease in momentum marks another trend change.

Second Trend Change Sequence

1. Momentum continues to increase from week to week indicating the current trend is still in place.
2. Momentum decreases from one week to the next indicating a trend change has occurred.
3. Momentum continues to decrease, but then
4. No Crossover Occurs.
5. Instead, momentum begins to increase again marking the beginning of a new trend.
6. The next decrease in momentum marks another trend change.

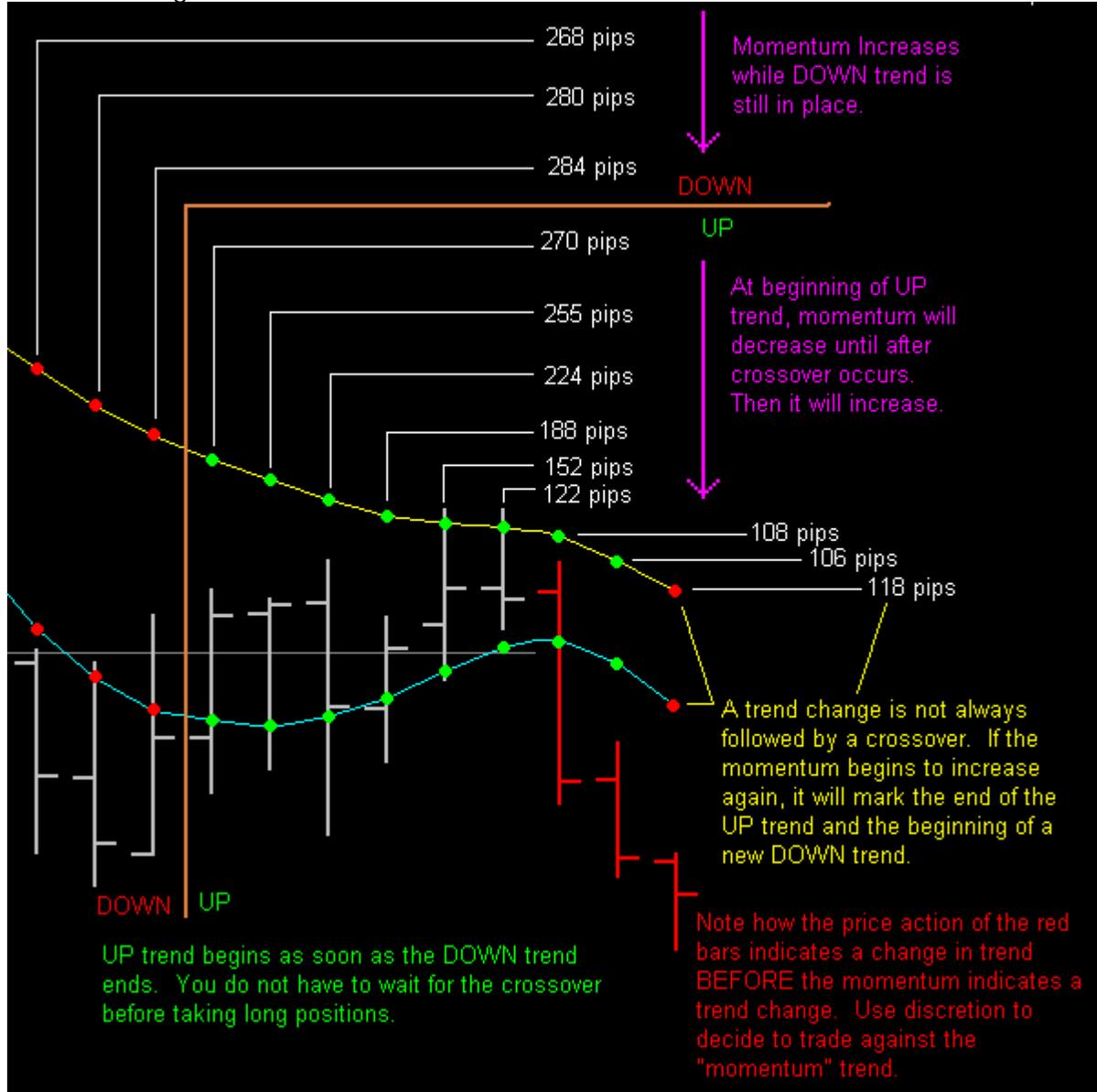
In summary, a change in momentum always indicates a change in trend, however a crossover does not always occur between trend changes.

The image below will help illustrate a trend change without a crossover.

Please pay special attention to the red bars. These are all bearish bars with lower highs and lower lows indicating the trend is in the downward direction. Please note that the price action of these bars PRECEEDS the trend change as indicated by the

increase in momentum. This is why the Vegas Team said that the model is vulnerable to losses during trend change. Use of discretion is advised. If the price action strongly indicates a trend opposite that indicated by momentum, you may wish to either stay out of the market, or to trade against the momentum trend and with the price action trend. If in doubt, stay out!

Attached Images



Filter for the Weekly Chart

There are two filters used in the Knife system. One on the weekly chart, which I'll explain now; and one on the 4 hour chart which I'll explain later in the sections pertaining to the 4 hour chart.

As you have seen in the previous few sections, as long as a trend continues, the momentum continues to increase. A trend change is signalled when the momentum decreases. In order for the momentum to decrease, an opposing force must be present that is against the prevailing trend. Possible opposing forces include news events, bank intervention and trader sentiment. News events and bank intervention, being short term in nature, may only cause a brief trend reversal which then reverts back to the previous trend direction. I think trader sentiment is the greatest cause of a trend change that will endure for many bars.

The majority of the time, when a trend change occurs, the momentum will have a relatively small value that is less than 200 to 300 pips. For these relatively small values, any amount of decrease in the momentum will signal a trend change. However, on occasion, the momentum will exceed 500 pips. When this happens, the strength of the opposing force needed to overcome the momentum must be greater to provide a valid trend change signal. Therefore, the following filter must be used whenever the momentum is greater than 500 pips in order to signal a trend change:

The momentum must decrease by 10 pips or more from one bar to the next,

OR

The momentum must decrease by any amount for two consecutive bars.

Weekly Trend Indicator by Team Aphid!

While it takes less than a minute to calculate the momentum change on the Weekly chart, and it only needs to be done once a week after the market closes on Friday, it would be nice to have MetaTrader 4 calculate it for you in realtime. Well here's some good news!

The head developer of Team Aphid has graciously provided an indicator for MetaTrader 4 that displays the current weekly trend on the 4 hour chart in real time. Go Team Aphid!!!

Please note that the Team Aphid indicator shows the weekly trend in real time, by basing its calculations on the current weekly bar and the previous weekly bar. This means that a trend change indication can occur mid week.

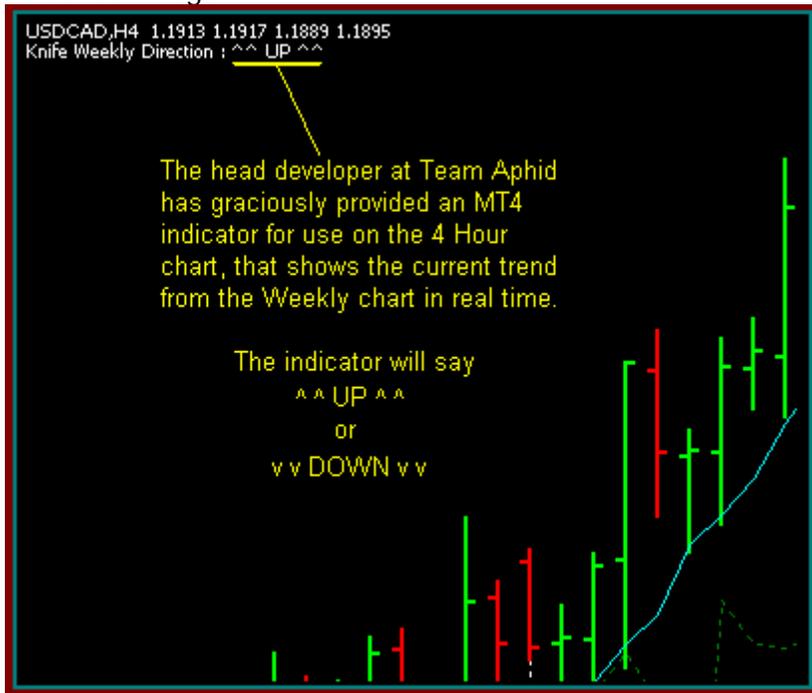
In contrast, the Vegas Team calculates the weekly trend right after market close on Friday using the just completed current bar and the previous bar. this means that a trend change only occurs at the end of the week.

This is just one of the differences between the Vegas Model and the Knife System.

The link to download the indicator will be provided at the end of this tutorial.

Before, I cover how to use the 4 Hour charts to determine trade signals, you will need an understanding of position sizing, take profit levels and risk models as they apply to this system. These will be covered in the next few sections.

Attached Images



Currency Pairs, Risk Models & Dynamic Profit Levels

Although the six USD pairs were used in the manual backtest, you are not limited to these six pairs. You may use any pair you like as long as the appropriate risk model is applied to it.

I'll describe the risk models first, and then show you how to choose an appropriate risk model for a given currency.

A "Risk Model" is nothing more than a pair of Fibonacci numbers, which will be used as the profit targets for a given currency. The three risk models that will be used are as follows

Risk Model 1: Low Volatility = 89 & 144 pips

Risk Model 2: Medium Volatility = 144 & 233 pips

Risk Model 3: High Volatility = 233 & 377 pips

Regardless of which Risk Model is chosen, they are all measured from the 55 SMA Median that is on the 4 Hour chart.

Example: Assume the 55 SMA Median has a current value of 1.1866 on the EUR/USD pair, and we want to apply the Medium Volatility values of 144 & 233:

MA+2 : 1.2099 (Second Take Profit for Long Positions [$1.1866+0.0233$])

MA+1 : 1.2010 (First Take Profit for Long Positions [$1.1866+0.0144$])

SMA55 : 1.1866 (Base value from which 144 & 233 pips are added or subtracted)

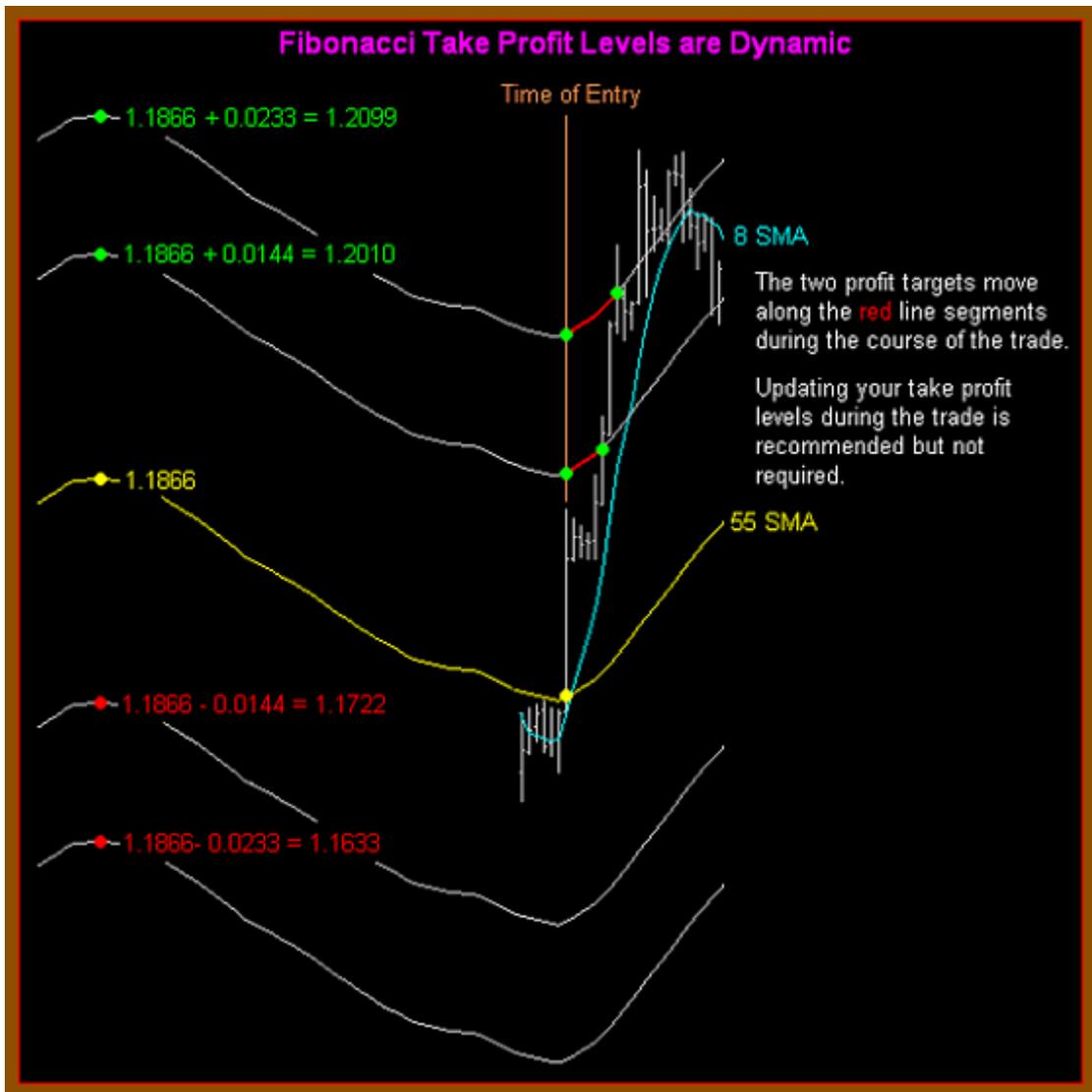
MA-1 : 1.1722 (First Take Profit for Short Positions [$1.1866-0.0144$])

MA-2 : 1.1633 (Second Take Profit for Short Positions [$1.1866-0.0233$])

An example of where these take profit levels appear, relative to the central 55 SMA, is shown on the left side of the chart below. On the right side of the chart, a successful long trade example is shown. Notice that the take profit levels for the trade on the right are different than the take profit levels illustrated on the left. Please understand that these Fibonacci take profit levels are DYNAMIC and are constantly changing value as they track the 55 SMA at their designated distances.

Therefore, when a trade is signaled, you will use the Fibonacci values that exist at the time the trade is placed. Once the trade is live, I recommend you adjust your take profit levels periodically to keep them aligned with the real time Fibonacci values. Remember that the price is attracted to the Fibonacci levels, so if the levels are moving in the direction of your trade, then keeping them updated might allow you to squeeze out a few extra pips. However, if the Fibonacci levels are moving counter to your trade direction, then keeping them updated might rob you of a few pips. In this case, you may just wish to leave the take profit levels where they were when you opened the trade.

Since my schedule is not conducive to making the take profit updates, I usually take the lazy way out and leave the levels at their entry values, without any apparent adverse effects. Play this in whichever way is best for your situation.
Attached Images



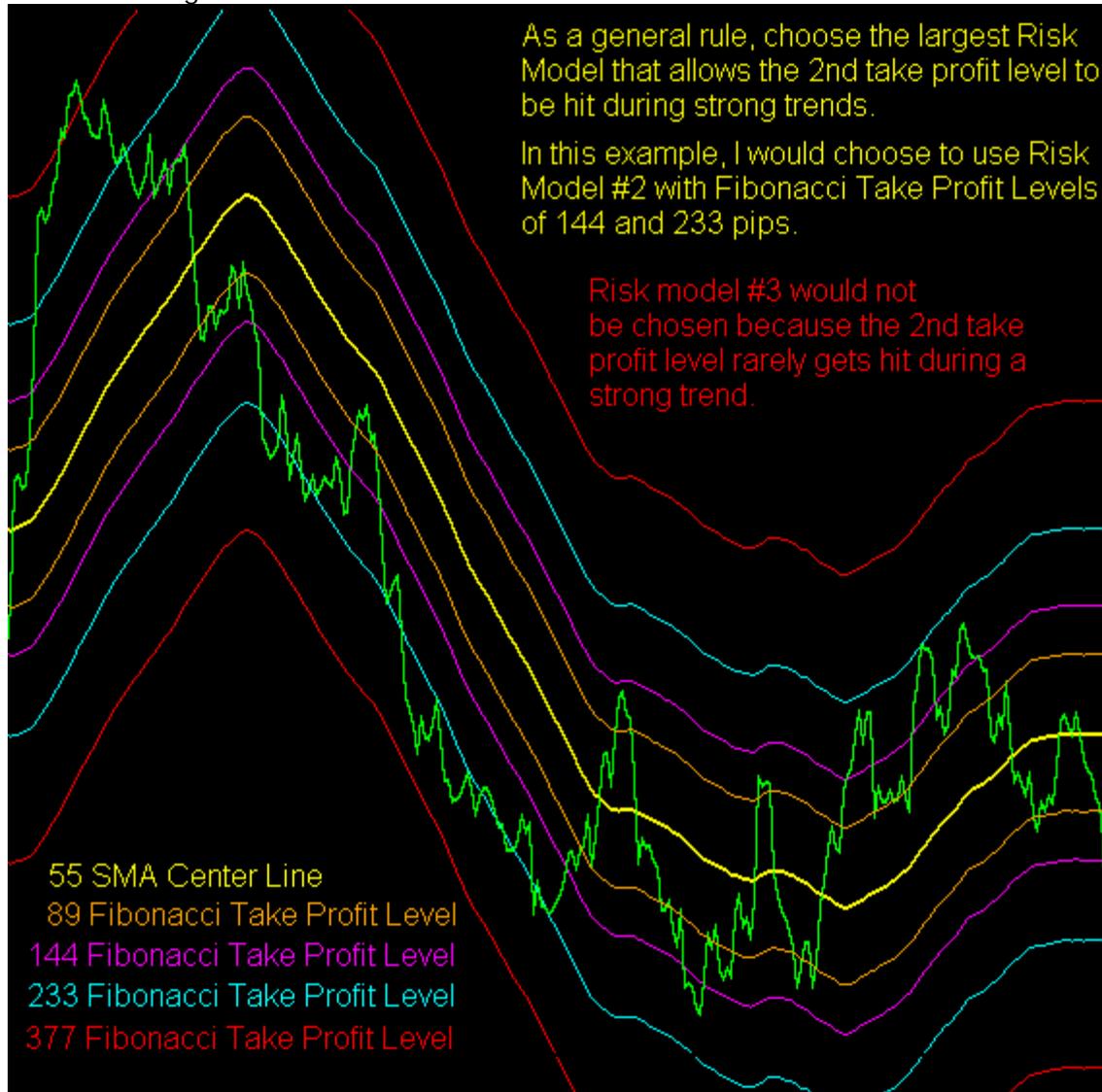
Selecting an appropriate Risk Model for a given currency.

Choosing a risk model to use with a particular currency is an art more than a science. The chosen risk model must fit the current volatility of the currency. Some currencies are generally more volatile than others. For example, GBP/USD is more volatile as a rule than USD/JPY. I use risk model #2 for GBP/USD and risk model #1 for USD/JPY.

The volatility of a given currency can also vary over time. It may be necessary to change the risk model used with a given currency as volatility changes. I must admit that this is speculation on my part as I have not yet encountered this situation. I mention it because it may be something worth being aware of.

As a general rule, choose the largest risk model that allows the 2nd take profit level to be hit during strong trends.

The graphic below, shows recent activity of EUR/USD on a 4 hour chart. All four take profit levels are shown (89, 144, 233 & 377). Note that during the strong downtrend, the 377 level did not get hit, while the 233 level got hit frequently during the down trend. In this example I chose Risk Model #2 with take profit levels of 144 & 233. Attached Images



Position Sizing for Primary and Secondary Trade Signals.

The Knife system gives two types of trade signals, which I call Primary and Secondary.

For Primary trade signals, you will use the full amount of position size as determined by your money management methodology, and for Secondary trade signals you will use half that amount. The reason for this is because the Secondary trade signals are not as reliable as the Primary trade signals.

Personally, I don't bother with half position sizes. I always trade full position size on both primary and secondary signals. If you have some experience, or after you've become comfortable demo trading the Knife, you may decide to do the same. However, if you are new to trading, I strongly recommend you use half position sizing on the secondary trades.

Regardless of whether you use all, or half of your position size, your position size in lots (standard, mini or micro) must be a multiple of three. This is to allow you to take profit at the first and second Fibonacci levels, and allow the final third of your position to run until the end of the trade is signaled by a slope change of the 8 SMA.

If you normally risk 2% on a trade, you will risk 2% on a Primary signal and 1% on a Secondary signal. If you normally risk 3%, you will risk 3% on a Primary signal and 1.5% on a Secondary signal.

Examples:

Primary Signal Position Sizing

Account size = \$2500
Lot size = micro
Risk = 3%
Stop = 45 pips
Currency = EUR/USD

Amount risked = $\$2500 * 0.03 = \75
Pip value of $\$0.10 * 45 \text{ pip stop} = \4.50
Number of lots = $\$75 / \$4.50 = 16.667 \text{ micro lots.}$
Rounded down to nearest multiple of 3 = 15 micro lots

5 micro lots removed at first take profit level
5 micro lots removed at second take profit level
5 micro lots removed at change of slope of 8 SMA.

Secondary Signal Position Sizing

Account size = \$2500
Lot size = micro
Risk = $3\% / 2 = 1.5\%$
Stop = 45 pips
Currency = EUR/USD

Amount risked = $\$2500 * 0.015 = \37.50
Pip value of $\$0.10 * 45 \text{ pip stop} = \4.50
Number of lots = $\$37.50 / \$4.50 = 8.333 \text{ micro lots.}$
Rounded down to nearest multiple of 3 = 6 micro lots

2 micro lots removed at first take profit level
2 micro lots removed at second take profit level
2 micro lots removed at change of slope of 8 SMA.

Of course, if the trade goes against you before any profit targets are hit, you will exit the entire position at the change of slope of the 8 SMA.

4 Hour Moving Averages & Slope Changes.

The four hour chart is where you'll look for trade signals. On the four hour chart you need to put two moving averages.

First put in a 55 Simple Moving Average based on the median price $(H+L)/2$.

Second put in an 8 Simple Moving Average based on the close.

By having the 8 SMA based on the close, you'll be able to make more precise entries. More on how to do that later. For now, for the benefit of those who may not be familiar with the term, we'll briefly discuss "slope" and how it is used to signal trades.

When the 8 SMA is moving up and to the right, (uphill), it is said to have a positive slope. Conversely, when the 8 SMA is moving down and to the right (downhill), it is said to have a negative slope. When the 8 SMA moves horizontally from one bar to the next, it is said to have a zero or neutral slope. We'll make use of this concept of a neutral slope later in determining precision entries.

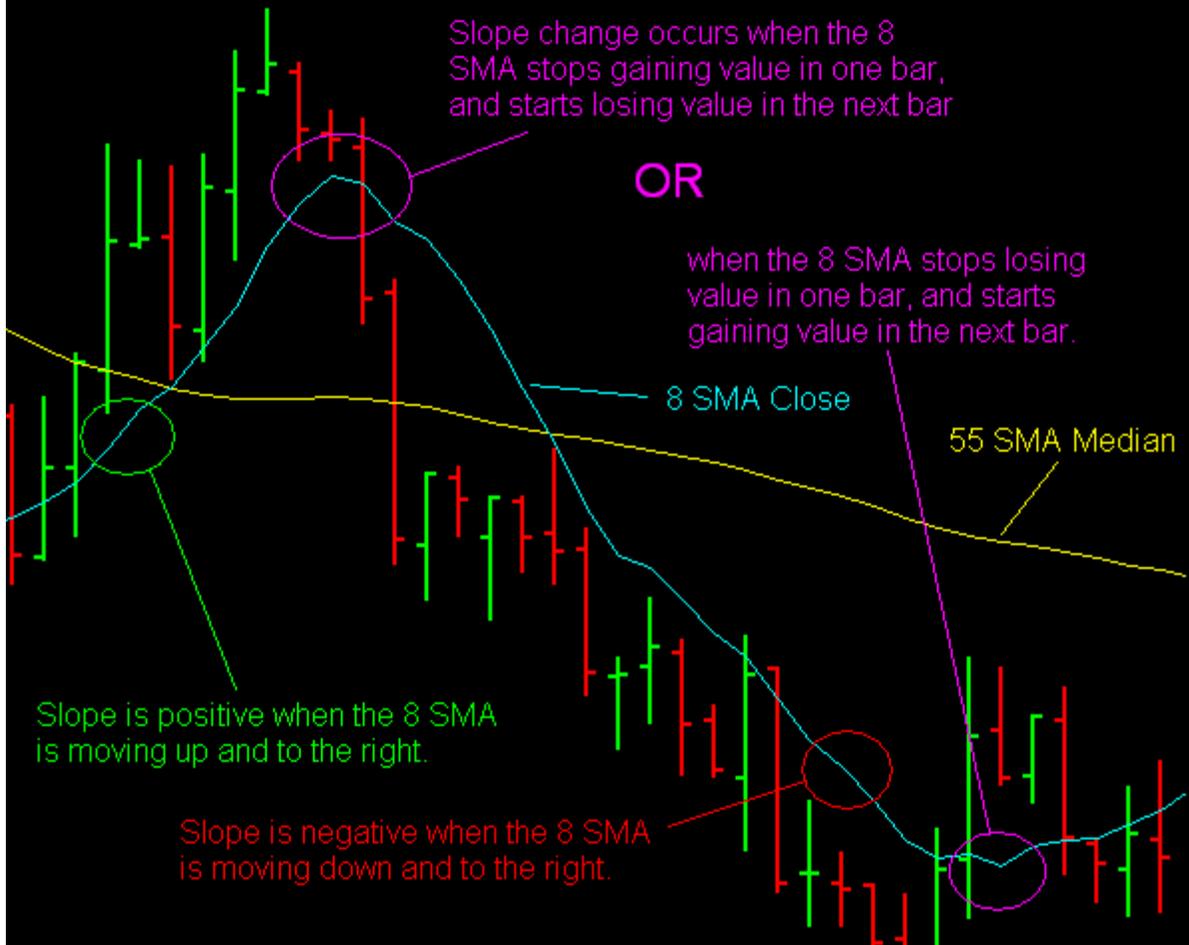
When the slope of the 8 SMA changes from positive to negative, or from negative to positive a trade is signaled. However this is only true if the new direction of the slope is in the same direction as the trend as determined on the weekly chart. Therefore a signal to go long occurs whenever the weekly trend is UP and the slope of the 8 SMA changes from negative (or neutral) to positive. A signal to go short occurs when the weekly trend is DOWN and the slope of the 8 SMA changes from positive (or neutral) to negative.

A change in slope that is in the same direction as the weekly trend does indeed signal a trade in that direction. However, depending on where the slope change occurs relative to the 55 SMA will determine the position size that will be put on. This results in two types of signals. A primary signal in which the full position size of your money management system is used, and a secondary signal in which only half the position size is used. Each of these trade signals will be explained in the next few sections.

Attached Images

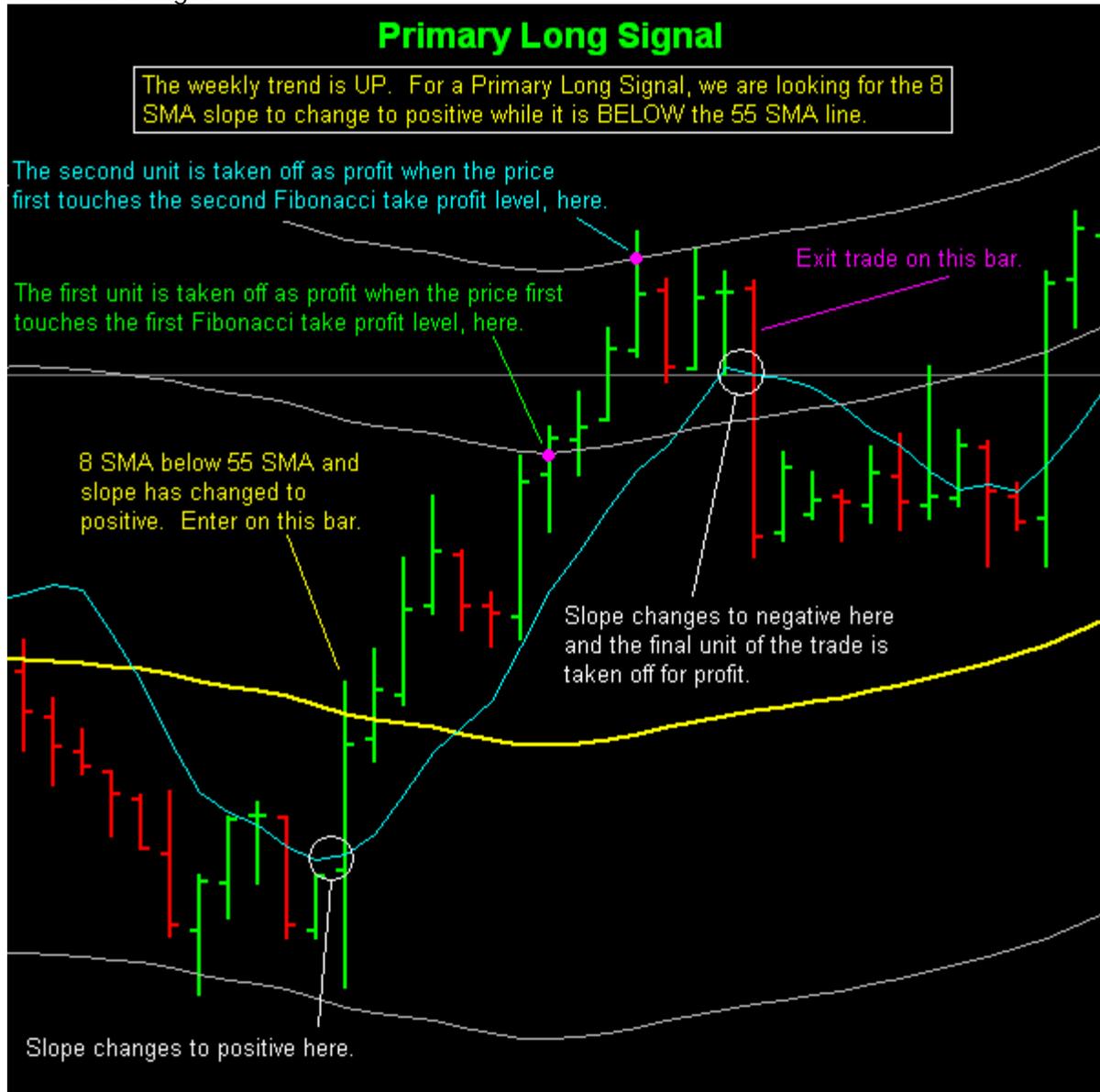
Positive & Negative Slopes, and Slope Changes

Haaaaang on Slopey, Slopey hang on! :-))



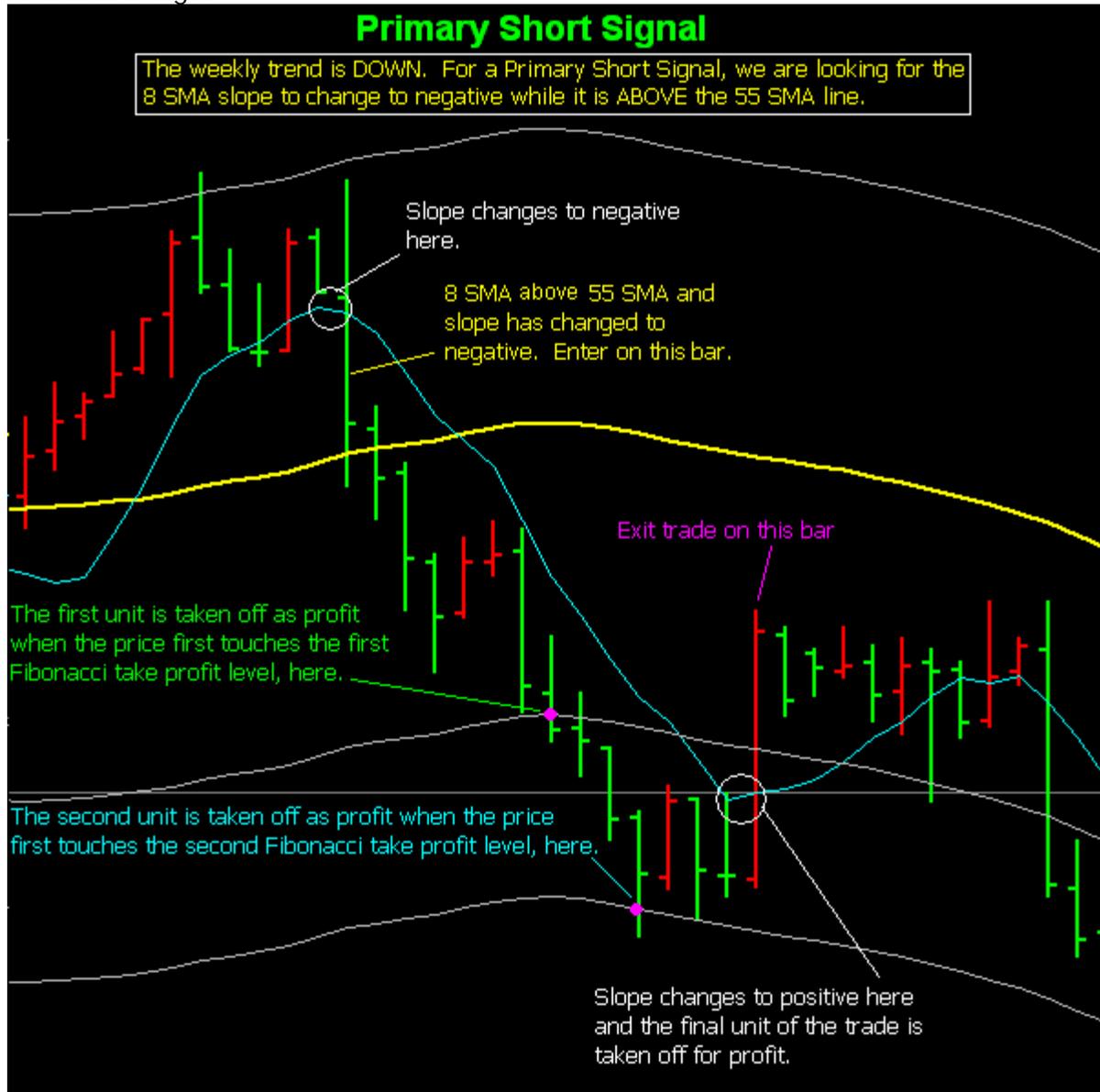
Primary Long Signal

Attached Images



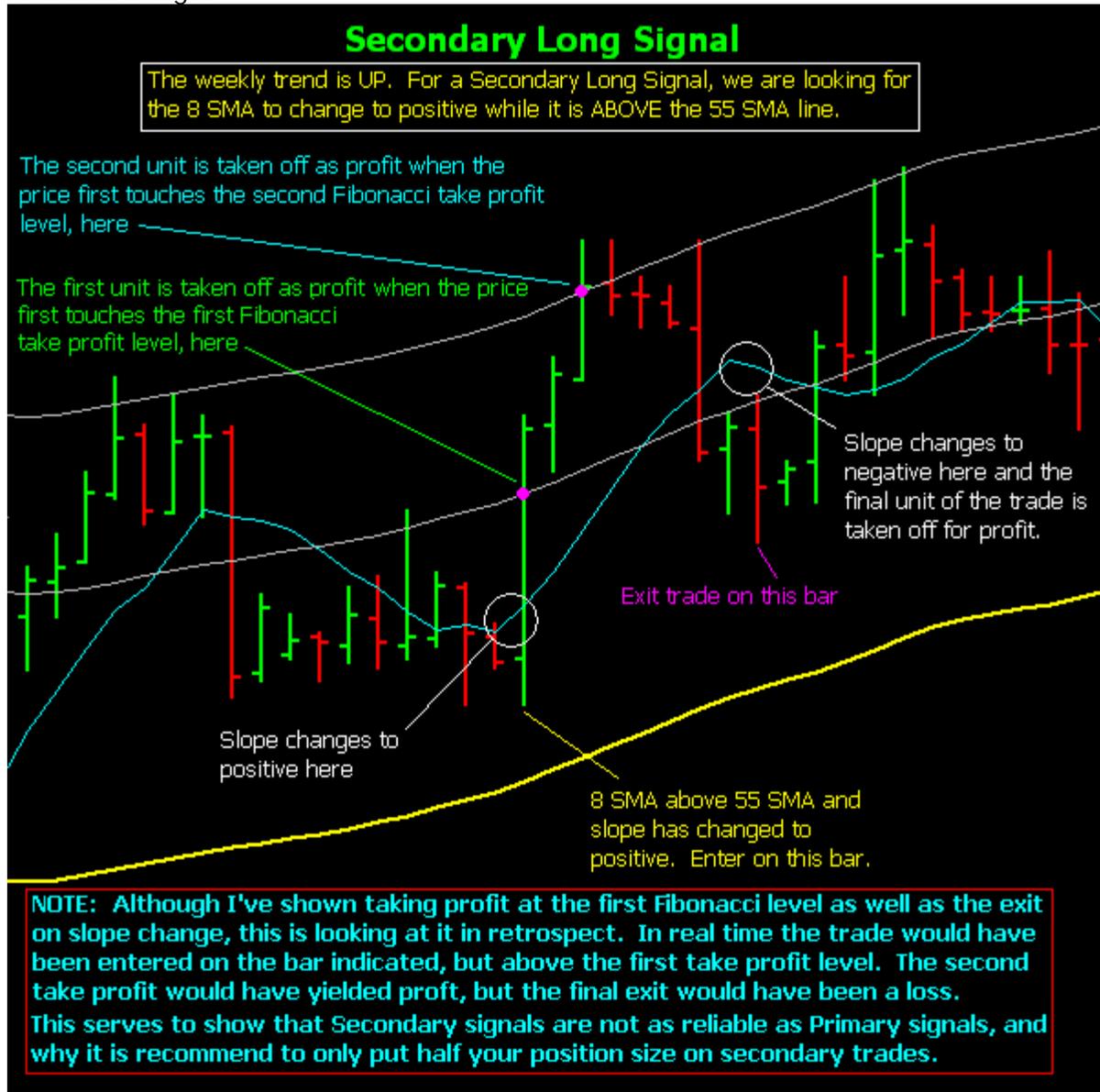
Primary Short Signal

Attached Images



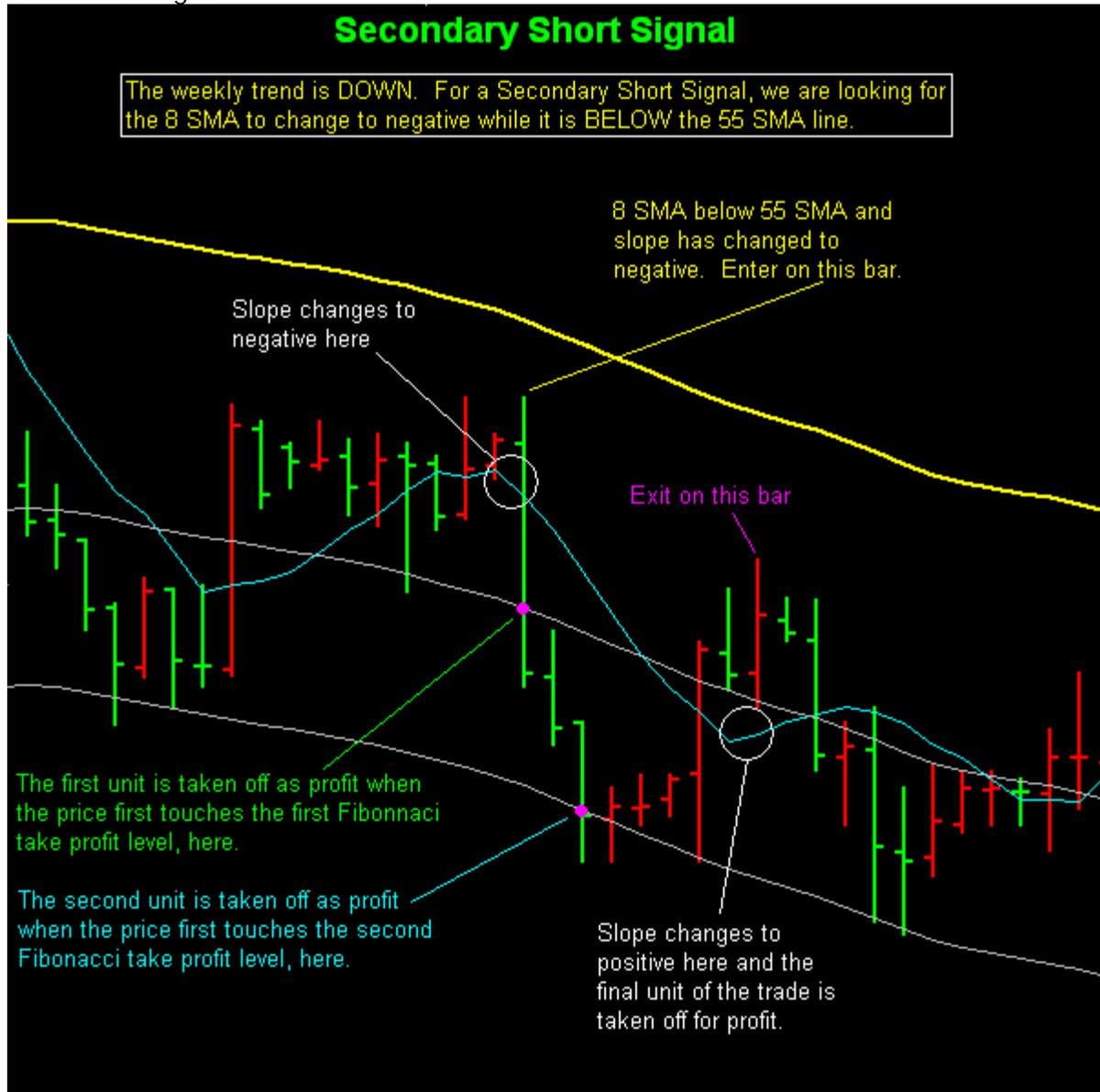
Secondary Long Signal

Attached Images



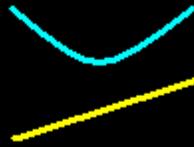
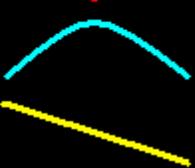
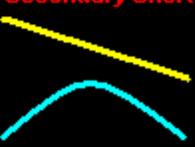
Secondary Short Signal

Attached Images



Knife Signal Summary Chart

Attached Images

Knife Signals		Slope turns UP	Slope turns DOWN
Trend is UP	$\frac{8}{55}$	Secondary Long 	1.5 Units
	$\frac{55}{8}$	Primary Long 	3 Units
Trend is DOWN	$\frac{8}{55}$	3 Units	Primary Short 
	$\frac{55}{8}$	1.5 Units	Secondary Short 

Precision Slope Change Determination

Up until now, I've been speaking of slope change in general terms. But the question remains, "How much slope change constitutes a signal?".

In the original Vegas 4 hour Model document, Vegas makes the following statement:

A more careful look at the 4 hour chart will show large 4 hour bar spikes that often change the slope of the 8 SMA. The reason we chose the 8 SMA with close only, is so that we can better estimate in the next 4 hour bar period the price needed to change the slope before the period is over. Many times this will give us a huge profit advantage over waiting until the period is over.

Vegas said they used the 8 SMA on close to "better estimate" the price needed to change the slope. Team Aphid discovered that the price needed to change the slope could more than be estimated; it could be precisely determined.

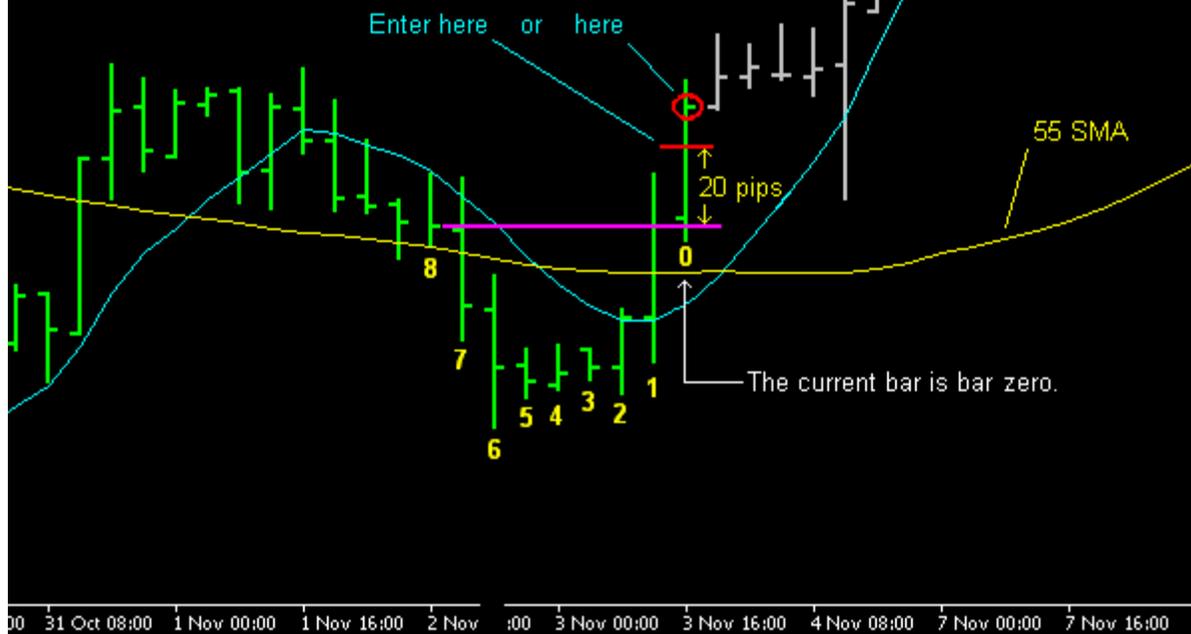
In the chart below I show that the slope of the 8 SMA will become neutral when price is equal to the close of the bar 8 bars back from the current bar. Any price movement beyond this "neutral line" will cause a slope change to occur. Therefore, entries can be made in reference to this neutral line. In the chart below I've give two ways of doing this. Which method you choose to use will depend on your personal schedule and your availability to monitor the chart every four hours. If monitoring the chart manually, you may choose to enter a trade when the just closed 4 hour bar has closed beyond the neutral line. If you are unable to monitor the chart every four hours, you could choose to enter an entry stop order to automatically trigger when the price has moved a certain amount beyond the neutral line. I use 20 pips as an example in the chart below. Doing it this way is called a "trailing entry", which, ideally, should be updated every four hours.

Attached Images

How to determine the exact point at which the 8 SMA becomes neutral.

Number the current bar zero. Starting from bar zero, count eight bars to the left. From the close of bar number eight, extend a horizontal line to the right. When the price is even with that line during bar zero, the 8 SMA line becomes exactly neutral. Any price movement beyond the line trips the 8 SMA to the opposite slope. To filter the signal you can either have a trailing entry that activates a certain distance beyond the neutral point, say 20 pips, or simply enter the trade on the first close beyond the neutral point.

The neutral line is only valid for the duration of bar zero.



Pre-entering orders on an upcoming neutral line

There will be times when you will be at your computer right before the end of the current bar. At these times, it makes sense to place your entry stop orders based on the neutral line of the soon to open 4 hour bar, rather than the neutral line for the current bar. This is simply a matter of using the close 7 bars back instead of 8. This is illustrated in the chart below.

Attached Images



A Bit of Discretion

As I said in the introduction, the Knife is not a 100% mechanical system. Some discretion is needed. Because the use of discretion is an art, and varies so much not only from system to system but from trader to trader, it is outside the scope of this tutorial to cover every possible contingency. I will give a couple of examples in this tutorial, but by far the majority of exposure you will receive will be in the Knife Discussion thread, where all subscribers and myself can point out discretionary situations as they occur in real time.

That said, here is a bit of discretion on the 4 hour chart in the choice of the number of pips to set your trailing entry stop order to. The chart below is the same as in the previous post, except that a trend line has been drawn. Because it is possible that price could respect the trendline and bounce back up, the pip level below the neutral line has been set to 30 instead of 20 to get the entry point below the trendline. The number of pips to use is not a fixed number. It should vary depending on recent market action and the use of technicals such as trendlines, pivot points, fibonacci levels and support/resistance lines. However, for those of you who wish to use less discretion and always use the same number, then pick a number you are comfortable with and stick with that number. Your choice of that number of course is "discretionary". 😊

Attached Images

AUD/USD 4h chart. Weekly trend is DOWN

Since bar 0, the current bar, is about to expire in 7 minutes, rather than use the close of the 8th bar as the neutral line, I used the close of the 7th bar instead since it will come online in 7 minutes when the current bar closes. I placed a trailing entry order to go short when price hits the green line, which is 20 pips below the neutral line to act as a filter on the entry. I give this as an example of how you can anticipate upcoming neutral lines and play them to set trailing entries. Let's you be away from your 'puter a bit more. :-)

Since the 8 sma is above the 55 sma, this will be a primary signal and I've put on the full three units for this trade. If the the 8 sma had been far enough below the 55 to miss it when it hooks down I would have only put on 1.5 units.

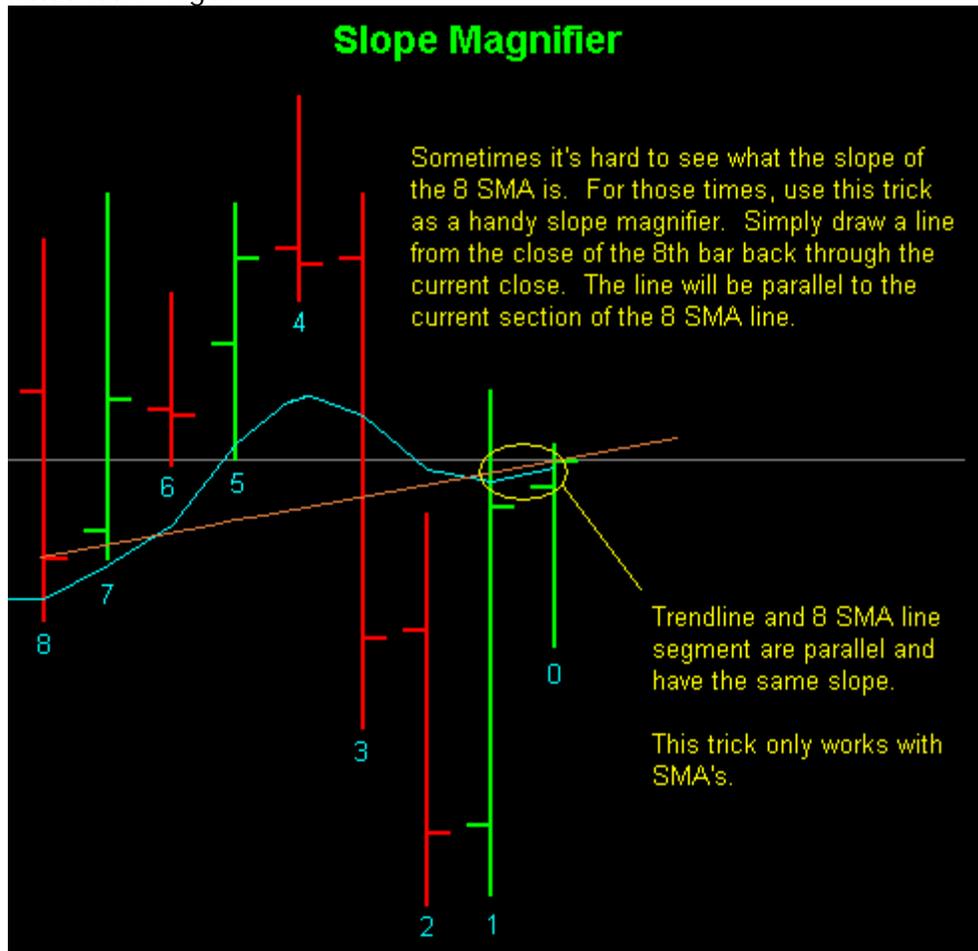


I've increased the filter to 30 to get the entry below the trendline I just noticed.

Handy Dandy Slope Magnifier

This isn't really part of the system, but it is useful for those of you who like to visually examine the slope of the 8 SMA line. Sometimes, when the 8 SMA is very close to the neutral point, it is nearly, but not quite horizontal. Since it is hard to see this, the trick shown below comes in handy. Enjoy!

Attached Images



Initial Setting & Updating of Stops & Exits

Setting of stops and exits is probably the most difficult aspect of any trading system, including the Knife. The Vegas Team themselves side-stepped the issue in my opinion by offering only the following statement regarding setting of stops:

Stops can be placed using technicals [support/res/trendline] of the most recent 4 hour bars.

Thats it. Not a whole lot of guidance there.

As for myself, I have tried a variety of stop placement methods and have found none to be completely satisfying.

I will present here what I have been using that, for me at least, works reasonably well and falls within my comfort zone, albeit the outer edge of that zone.

STOPS: Initial & Trailing

If I am sitting at my computer when a signal is given, I set the stop two pips beyond the most recent swing high/swing low. This results in a stop loss that in most cases falls somewhere in the range of 80 to 120 pips.

If I will be away from my computer, I will enter an Entry Stop order, and will set the stop on the most recent swing high/swing low IF ONE IS AVAILABLE. Sometimes, when setting entry stop orders ahead of time the chart will not yet have formed a clear swing high/swing low to set your stop to. In those cases, I set my initial stop to 100 pips, which is the average of the range mentioned in the previous paragraph.

I have tried using a smaller initial stop but have found that I get stopped out too often, just to have the market subsequently move in my direction. I think of this as an emergency stop to protect me against large adverse moves of the market.

Once the trade has moved 30 pips into profit, I move the stop to Break Even. Once the trade has moved 50 pips into profit, I begin trailing a 50 pip stop, and keep this updated as often as I can. More often than not, the trailing stop is what gets me out of the trade rather than a change in slope of the 8 SMA.

Here are a couple of alternate ideas for trailing exits:

Trail the stop 30 to 50 pips beyond the 8 SMA, or
Trail the stop 30 to 50 pips beyond the current neutral line.

Try each method in your demo account and find the one that fits you and your schedule.

Exits for taking profit.

When you initially enter your order, set the two take profit levels to the current values of the Fibonacci levels you are using for that currency.

As the trade progresses, update these two levels to the current Fibonacci values IF the Fibonacci levels have been moving in the direction of your trade and will result in gaining extra pips. Otherwise, if the Fibonacci levels have moved against your trade and would decrease your profit, the leave the levels at their initial entry values.

Filter for the 4 hour chart (50 pip rule)

Here are some words of wisdom from Team Aphid's head developer regarding the 50 pip rule on the 4 hour tunnel model.

Quote:

Originally Posted by **Team Aphid**

Here's what the Vegas Team says about the filter on the 4 hour chart:

"The second filter is on the 4 hour chart. If the 8 SMA and the 55 SMA and the market price are all within 50 pips or so of each other, we go to technicals [breakout] to continue the trade. We do this because, at this juncture, you are more likely to get the 8 SMA jumping up and down 2 or 3 pips every few bars, thus generating a false trade signal. It doesn't happen very often, but when it does, using this filter can save us money, and the market isn't really moving anywhere anyway. Therefore, a breakout of the techs makes sense to initiate a trade, if it's in the direction you are supposed to be trading" - Vegas Team

No idea how it works, looks impressive on the chart though. Only joking! To understand it properly you need some good Irish Whisky, triple distilled, (not bourbon), cordless keyboard because you must look at the chart with feet on table. OK, now that we've sorted out the difficult part lets get to the programming part of the rule.

Bit of smoke and mirrors here, lazy programmer and some reverse psychology. Instead of looking at price (will come to the why in next paragraph) and the 2 MA's I only use the difference between the two MA's. If the distance between the MA's are less than 50 a WARNING will appear, if price are outside the boundaries in the warning the brain will OK the rest of the process. Less programming for same effect. To calculate the boundaries, just add 50 to the lower of the two MA's and subtract 50 from the highest.

Now why leave price out. Put your binary logic thinking cap on, or take another whisky. Lets call the two MA's T (top MA) and B (bottom MA), and price P. For the within 50 pips part of the rule we can have one of the following scenarios (read top to bottom, as on chart):

*T | P | T
P | T | B
B | B | P*

In the first column only T and B plays a role because P is between them. Therefore, P can be dropped. The next two share the same logic: for P, T and B all to be within 50 pips means that T and B will definitely be less than 50 pips. No question about that. So as long as T and B are less than 50 pips we need to give a boundary where price must be outside. Since we calculate it as above we don't need it in the check. That is, we don't wait for everything to move 50 pips apart. We say beforehand where the boundaries will be and if P moves outside that consider a trade.

I know it sound confusing like hell but look at a chart.

To help you visualize this, I've added the chart below. The 55 SMA & 8 SMA are within 50 pips of each other. I've drawn two horizontal lines. The green line is 50 pips above the lower SMA (the 8 SMA in this case), and the red line is 50 pips below the upper SMA (the 55 SMA in this case). If price is between these boundaries, don't take any trades. If price moves outside these boundaries, there are two ways to play it:

First, you can simply play it as a breakout and enter a trade in the direction indicated by the weekly chart trend direction.

Second, you can simply treat price being outside the boundaries as an indication that it's OK to start looking for slope change signals again.

I use either the first or second option depending on what price action on the 4 hour looks like. Sorry, this part is discretionary and I would be hard pressed to explain it in general terms. We can have discussions in the Knife Discussion thread for particular situations.

In the next post, I have attached the MetaTrader indicator described by the Team Aphid head developer above.

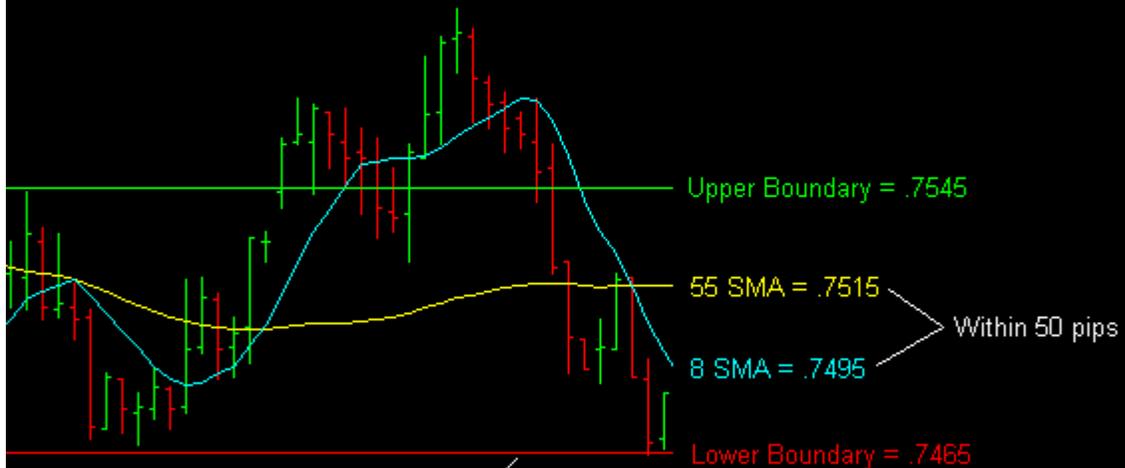
Attached Images

50 Pip Rule for 4 Hour Chart

Upper boundary = Lower SMA (8 in this case) + 50 pips = .7495 + .0050 = .7545

Lower boundary = Upper SMA (55 in this case) - 50 pips = .7515 - .0050 = .7465

Price is not considered when calculating the boundaries. Only the SMA's.



The weekly chart shows a DOWN trend, so a trade would only be taken when price breaks the lower boundary.

MetaTrader Indicator from Team Aphid

Attached to this post is the MetaTrader indicator designed by the brilliant head developer of Team Aphid. Look at the next post for a screen shot and brief description.

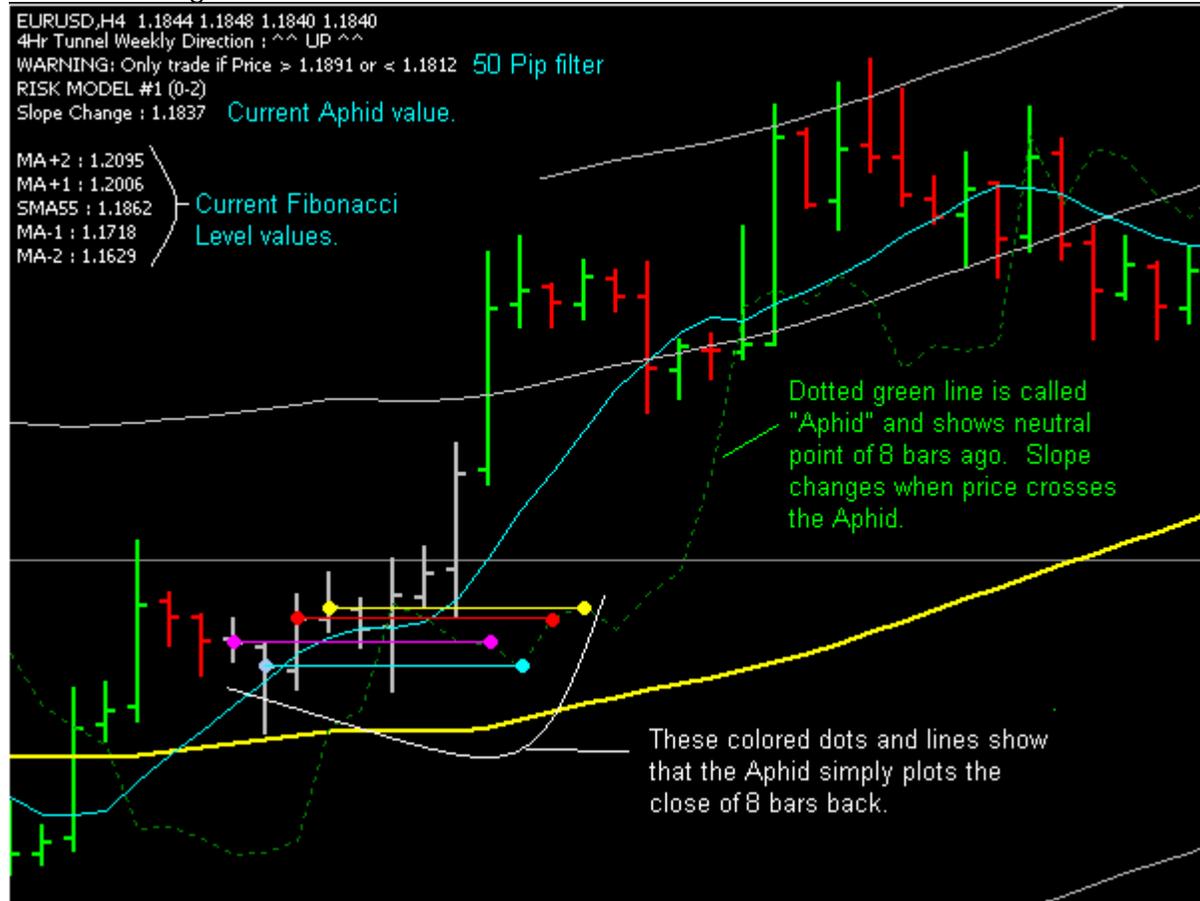
Attached Files

[FF Tunnel Chart.zip](#) (7.0 KB, 360 views)

Screenshot of Team Aphid Indicator(s)

The chart below is a screenshot of the Team Aphid Indicator(s) which can be downloaded from the previous post.

Attached Images

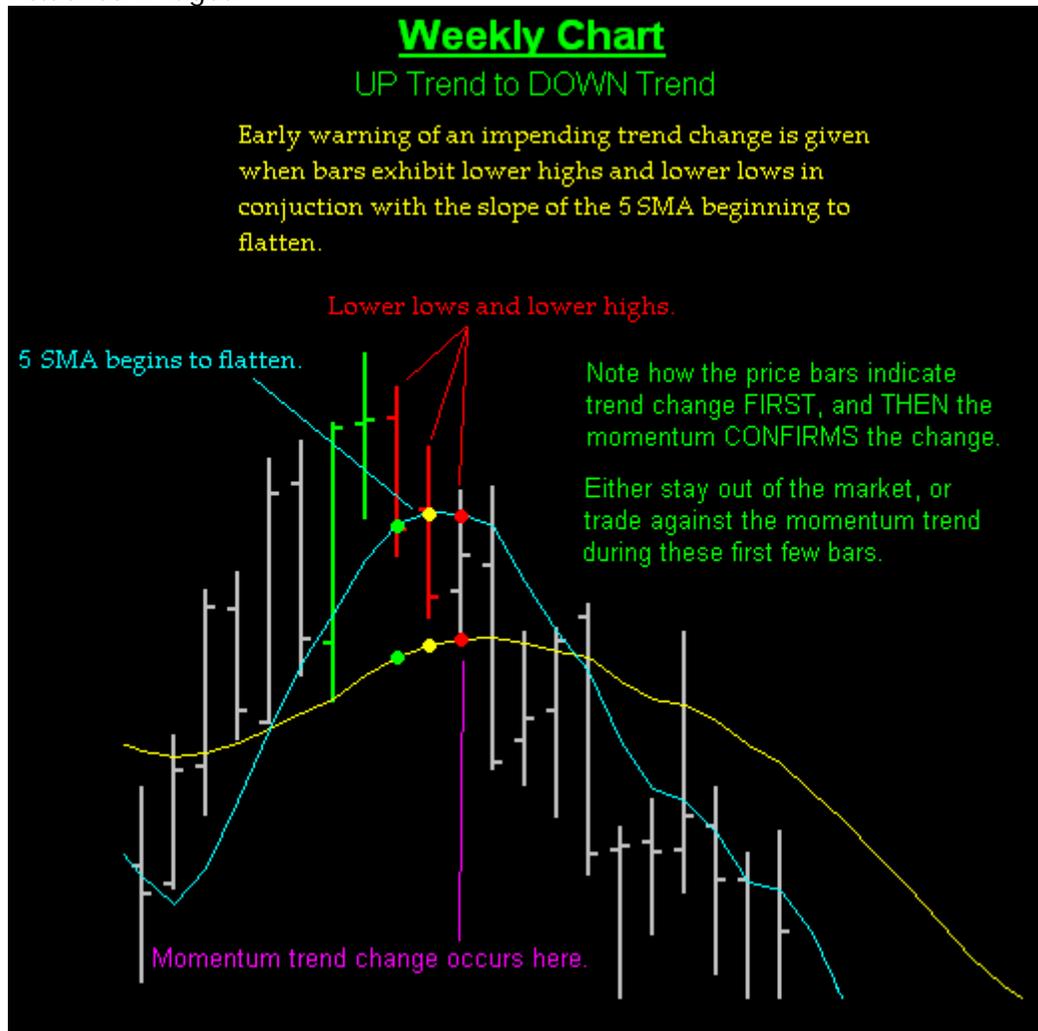


Discretionary Example: Lagging Trend Change Long to Short

Both this post and the one following show how trend direction, as indicated by momentum lags trend direction as indicated by price action.

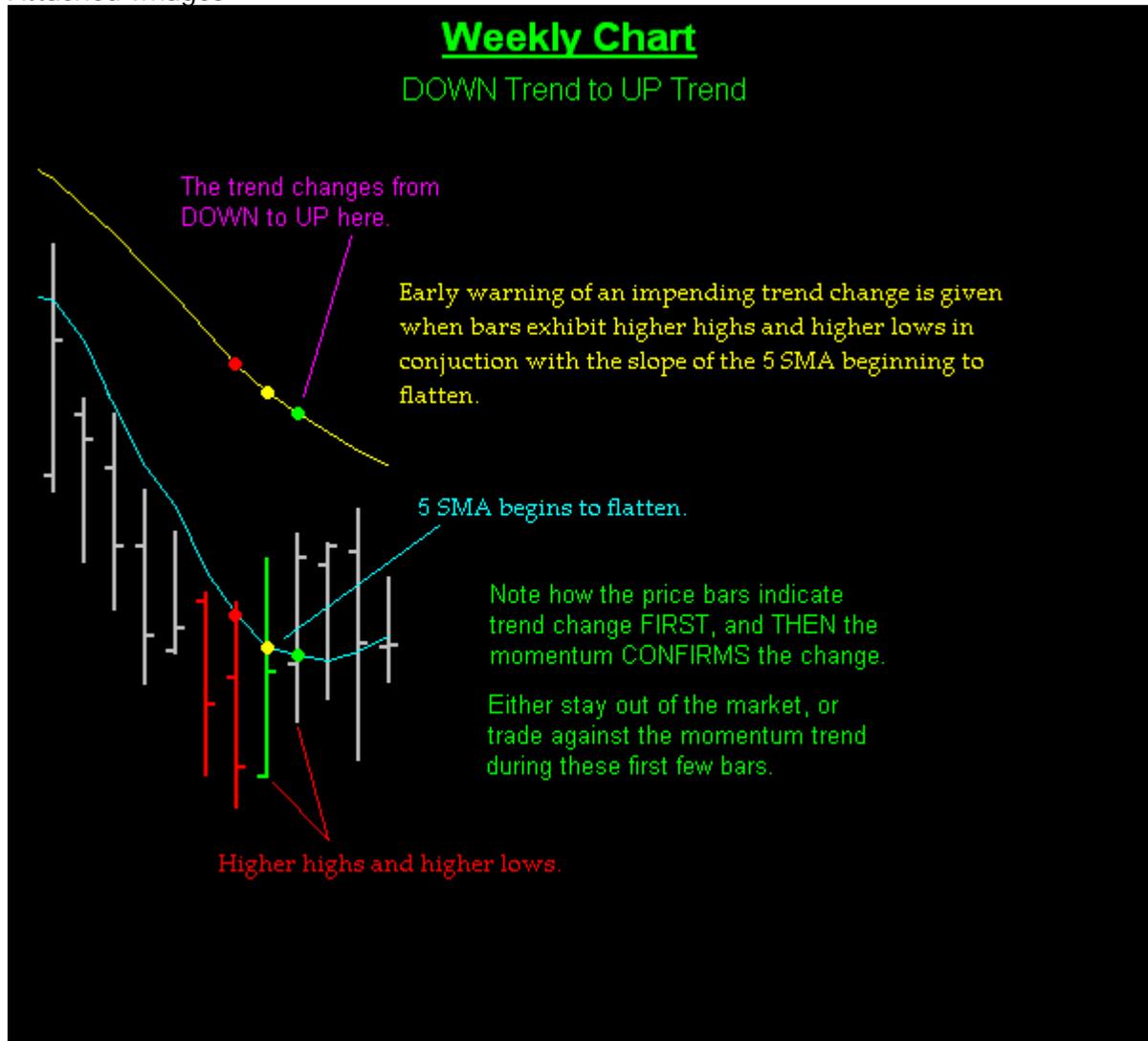
You can follow the momentum indication mechanically and still have a positive edge, but by incorporating a discretionary view of price action into your trade evaluation, you can potentially decrease the number of losing trades and/or increase the number of winning trades.

Attached Images



Discretionary Example: Lagging Trend Change Short to Long

Attached Images



Discretionary Example: Single bar false trend change.

Okay, I know this is not a very good example because it is easy to see in retrospect, but not while it is happening in real time. The problem is, you don't know it is a single bar false trend change until the following bar is fully formed.

As you can see from this and the two previous discretionary examples, the use of the weekly chart for trend determination is not perfect. I believe this is why Vegas themselves said the system is vulnerable to losses during trend changes.

While I do believe that following the weekly trend mechanically has a statistical edge that will yield wins that are greater than losses, I also believe it is emotionally difficult to trade it mechanically, due to the larger drawdowns.

Therefore, to reduce drawdowns, I like to temper what the weekly chart is telling me by comparing it to the price action on the daily chart, and the slope of the 55 SMA on the 4 hour chart. By examining these all together, I get a more detailed view of when to trade against the trend, and when to stay out of the markets. This is something that can only be gained from experience. As real time examples of this occur, I will point them out in the discussion forum. Also, if you think you are seeing such a situation developing on the charts, please do bring it up in the Knife Discussion forum so everyone can benefit from the example.

Have I mentioned you should only trade the Knife in a DEMO account until you're comfortable with it? 😊
Attached Images

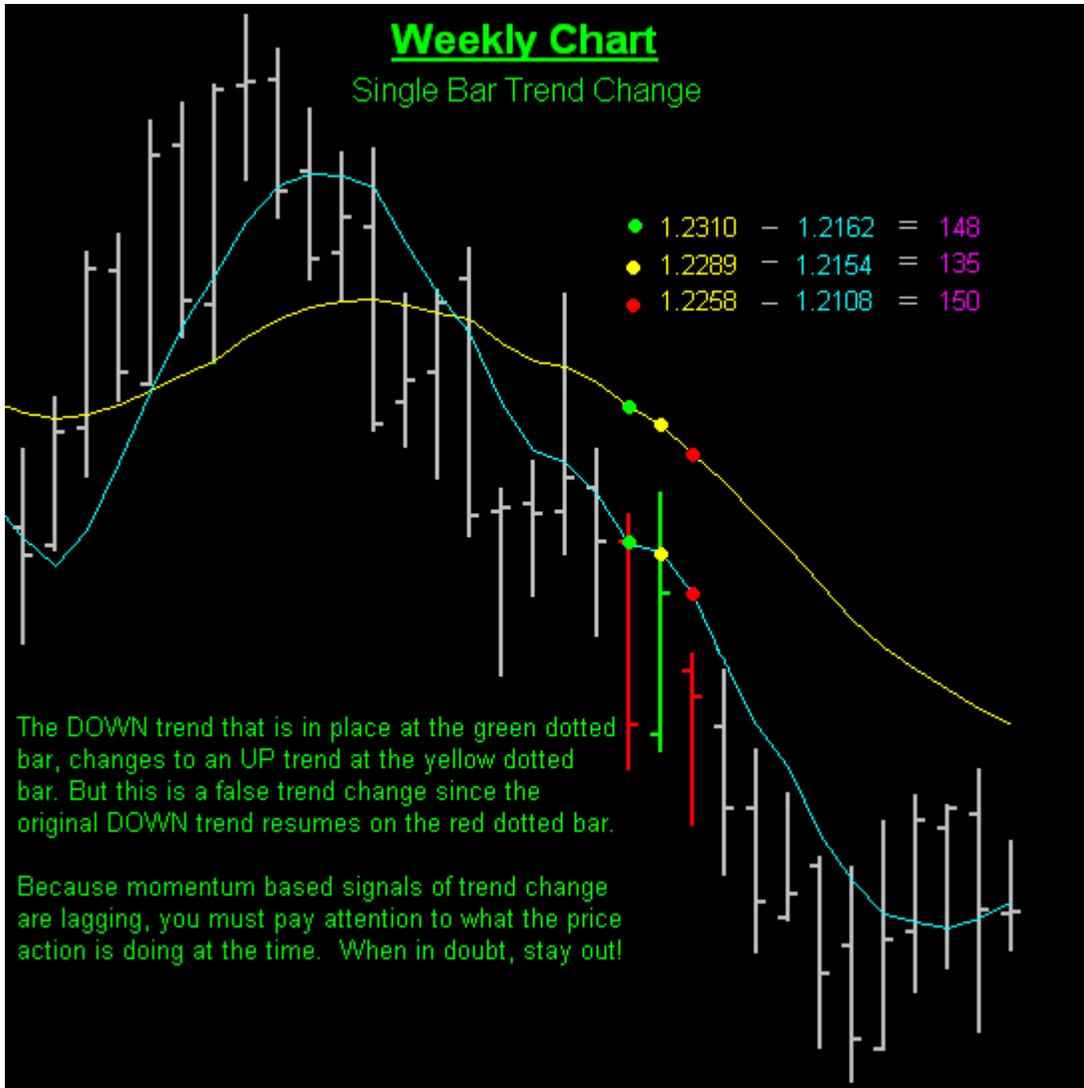
Weekly Chart

Single Bar Trend Change

- 1.2310 - 1.2162 = 148
- 1.2289 - 1.2154 = 135
- 1.2258 - 1.2108 = 150

The DOWN trend that is in place at the green dotted bar, changes to an UP trend at the yellow dotted bar. But this is a false trend change since the original DOWN trend resumes on the red dotted bar.

Because momentum based signals of trend change are lagging, you must pay attention to what the price action is doing at the time. When in doubt, stay out!



Tutorial Conclusion

This concludes the Knife System Description. However, based on the discussions that take place in the Knife Discussion thread, I expect to update this tutorial on occasion.

If you have any questions about this tutorial or anything else, please do post them in the Knife Discussion Thread.

Diallist