MTPredictor™

Software & training for Risk/Reward trading with Elliott wave

MTPredictor Help File

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Position sizing, Tick sizes and Tick values.

In this help file I would like to introduce the concept of ***Position Sizing***. But, before we can start on this topic, we need to know and understand the markets we are trading - particularly the "**Tick Size"** (minimum price fluctuations) and "**Tick Value"** (the $ value of this minimum price fluctuation). These are used to calculate both the levels at which you enter trades and the initial risk on your trades and, therefore, how many contracts (or lots) you can trade for each set-up.

As there are 3 main types of speculative contracts - Futures (and Commodities), Stocks and Forex - I will cover these in separate sections.

Futures (and Commodities)

Although this may seem complicated at first sight, it is not. But if you do not fully understand first time through, please re-read as understanding this is vital to your success when trading Futures and Commodities.

When we have a trade set-up, we place our order *1 tick* beyond the actual high or low of the trade entry bar and the protective stop is then placed 1 tick beyond the last swing high or low. So the first concept we need to understand is what is meant by 1 tick.

A Tick is the *minimum price fluctuation* that each Futures (or Commodity) contract can move in. So when a price moves up (or down) by 1 tick, this is the value that it moves by. Let's take a look at an example.

On the ES (E-mini S&P 500®) 1 tick is 0.25 of a full point. So the price moves like this:

1293.00
1293.25
1293.50
1293.75
1294.00

If you were going long 1 Tick above a bar's high of 1293.25, you would place your order at 1293.50, i.e. the smallest minimum value by which the contact could move above the high of 1293.25.

This Tick Size or minimum price fluctuation is different for all Futures and Commodity contacts. But I hope you can understand the concept here and why you need to know this value for every market you trade.

Next, we need to understand the Tick Value of each market. This is the Dollar ($) value of the minimum price fluctuation or a 1 Tick move in your contract. In the ES example above this is $12.5, so a 1 Tick move from 1293.00 to 1293.25 would mean an increase or decrease in your trade by $12.5 for a single lot.

This is vital because you need to know exactly how much money ($) you would either make or lose as a market moves either with or against you. This is also crucial for position sizing - you need to know how much this value is for 1 lot or 1 contact of your current trade so you can calculate how many lots to trade for a given initial $ risk on the trade. I will cover this in more detail later but, for now, here is a quick example.

Let's assume you wish to risk 2% of your $20,000 trading account per trade.

2% of $20,000 = $400.

So you can risk $400 on each new trade.

Let's assume you are trading the ES, you have a buy order to go long at 1293.50 and (if filled) your protective stop would be at 1290.00. If you were trading 1 lot (or contract) your initial risk on the trade would be

((1293.50 – 1290.00) x $12.5 (Tick value)) / 0.25 (Tick size) = $175.

BUT if you wish to risk $400, the question you must ask is – "How many lots can I trade on this set-up?" The answer is the $ risk divided by the $ risk per lot or…

$400/$175 (in this example) = 2.28 or 2 lots (rounded down).

In other words, to keep a constant ($ or %) risk on every trade you need to trade 2 lots on this particular set-up. This number will be different for each new set-up, as it is governed by the difference between the entry and stop loss prices.

This is absolutely vital because when you risk a constant amount per trade your profits and losses will always be in direct relation to each other. This is vital to long-term trading success and is one of the most misunderstood concepts in trading. Again, I will cover this in more detail later but, for now, please understand that you must risk a constant value on each trade, and to do this you must adjust the number of lots you take on each set-up. For this, you must know the Tick size and Tick values for each market you are trading.

On the next few pages I have included current values for many of the common Futures and Commodities. These are only here for guidance - please note, YOU (the trader) are finally responsible for your own trades, so make sure these are correct before you place a trade. We at MTPredictor cannot guarantee the accuracy of these values. They may also change in the future, so it is ***your*** responsibility to ensure they are correct before placing a trade.

Table of common values for Futures and Commodities:

CURRENCY FUTURES

Contract	Sample Quote	Units	Tick Size	Tick Value	Contract Size	Exch.	Settle
Australian Dollar	0.6451	US$/AUS$	0.0001	$10.00	100,000 A$	CME	PD
British Pound	1.5892	US$/BP	0.0001	$6.25	62,500 BP	CME	PD
Canadian Dollar	0.7201	US$/CAN$	0.0001	$10.00	100,000 C$	CME	PD
Euro FX	1.1451	US$/Euro	0.0001	$12.50	125,000 euro	CME	PD
E-mini Euro FX	1.1451	US$/Euro	0.0001	6.25	62,500 euro	CME	PD
Japanese Yen	0.008611	US$/YEN	0.0001	$12.50	12,500,000 JY	CME	PD
Mexican Peso	0.085250	US$/PESO	0.0025	$12.50	500,000 MP	CME	PD
Swiss Franc	0.7611	US$/SWISS	0.0001	$12.50	125,000 SF	CME	PD

INDEX FUTURES

Contract	Sample Quote	Units	Tick Size	Tick Value	Contract Size	Exch.	Settle
E-mini S&P 500	1000.10	Index pts	0.25	$12.50	$50 x SP FP	CME	CASH
E-mini NASDAQ-100	1289.50	Index pts	0.50	$10.00	$20 x NQ FP	CME	CASH
E-mini Russell 2000	417.10	Index pts	0.10	$10.00	$100 x ER2 FP	CME	CASH
E-mini S&P MidCap 400	452.20	Index pts	0.10	$10.00	$100 x EMD FP	CME	CASH
E-mini Russell 1000	625.10	Index pts	0.10	$10.00	$100 x RS1 FP	CME	CASH
Goldman Sachs Commodity	238.05	Index pts	0.05	$12.50	$250 x GSCI FP	CME	CASH
NASDAQ-100	1289.50	Index pts	0.50	$50.00	$100 x ND FP	CME	CASH
Russell 2000	478.05	Index pts	0.05	$25.00	$500 x ER2 FP	CME	CASH
S&P 500	1000.10	Index pts	0.10	$25.00	$250 x SP FP	CME	CASH
S&P MidCap 400	501.05	Index pts	0.05	$25.00	$500 x MD FP	CME	CASH
Nikkei 225	10255.00	Index pts	5.00	$25.00	$5 x NK 225 Stk Av	CME	CASH
mini-sized Dow[SM]	8631.00	Index pts	1.00	$5.00	$5 x YM FP	CBOT	CASH
Dow Jones Industrial Average	9831.00	Index pts	1.00	$10.00	$10 x DJ FP	CBOT	CASH
Reuters CRB Index	241.05	Index pts	0.05	$25.00	$500 x CRB FP	NYBOT	CASH
US Dollar Index	95.81	Index pts	0.01	$10.00	$1000 x US $ Index	NYBOT	PD

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AGS and SOFTS

Contract	Sample Quote	Units	Tick Size	Tick Value	Contract Size	Exch.	Settle
Oats	155 1/4	cents/bu	1/4 cent/bu	$12.50	5,000 bu	CBOT	PD
Rough Rice	5.850	cents/cwt	$0.005/cwt.	$10.00	2,000 cwt	CBOT	PD
Soybeans	618 3/4	cents/bu	1/4 cent/bu	$12.50	5,000 bu	CBOT	PD
Soybean Oil	22.1401	cents/lb	$0.0001/lb	$6.00	60,000 lbs	CBOT	PD
Soybean Meal	191.10	cents/ton	10 cents/ton	$10.00	100 Tons	CBOT	PD
Wheat	310 1/4	cents/bu	1/4 cent/bu	$12.50	5,000 bu	CBOT	PD
Feeder Cattle	87.025	cents/lb	0.025	$12.50	50,000 lbs	CME	CASH
Frozen Pork Bellies	96.925	cents/lb	0.025	$10.00	40,000 lbs	CME	PD
Lean Hogs	63.825	cents/lb	0.025	$10.00	40,000 lbs	CME	CASH
Live Cattle	72.525	cents/lb	0.025	$10.00	40,000 lbs	CME	PD
Lumber	286.10	$.10/1000 bd ft	0.10	$11.00	110,000 bd ft	CME	PD
Milk	10.21	cents/cwt	0.01	$20.00	200,000 lbs	CME	CASH
Cocoa	1420	$/ton	1	$10.00	10 metric tons	NYBOT	PD
Coffee	73.35	cents/lb	5/100 cent/lb	$18.75	37,500 lbs	NYBOT	PD
Cotton	58.35	cents/lb	1/100*** 5/100 c	$5.00	50,000 lbs	NYBOT	PD
Orange Juice	90.85	cents/lb	5/100 cent/lb	$7.50	15,000 lbs	NYBOT	PD
Sugar #11	10.85	cents/lb	1/100 cent/lb	$11.20	112,000 lbs	NYBOT	PD
Corn	214.0	cents/bu	1/4 cent/bu	$12.50	5,000 bu	CBOT	PD

ENERGY FUTURES

Contract	Sample Quote	Units	Tick Size	Tick Value	Contract Size	Exch.	Settle
Natural Gas e-miNY	5.705	$/mmBtu	$0.005 per mmBtu	$25.00	5,000 mill Btu	NYMEX	CASH
Light, Sweet Crude Oil e-miNY	30.925	$/barrel	$0.025 per barrel	$12.50	500 Barrels	NYMEX	CASH
Light, Sweet Crude Oil	30.61	$/barrel	$0.01 per barrel	$10.00	1,000 barrels*	NYMEX	PD
Heating Oil	0.8091	$/gallon	$0.0001 per gallon	$4.20	42,000 gallons	NYMEX	PD
Natural Gas	5.561	$/mmBtu	$0.001 per mmBtu	$10.00	10,000 mmBtu	NYMEX	PD
Propane Gas	0.5471	$/gallon	$0.0001 per gallon	$4.20	42,000 gallons	NYMEX	PD
Unleaded Gas	0.6211	$/gallon	$0.0001 per gallon	$4.20	42,000 gallons	NYMEX	PD

METAL FUTURES

Contract	Sample Quote	Units	Tick Size	Tick Value	Contract Size	Exch.	Settle
Copper	77.9	cents/pound	$0.0005 per lb	$12.50	25,000 lbs	COMEX	PD
Palladium	343.1	$/oz	$0.05 per oz	$5.00	100 troy oz	NYMEX	PD
Platinum	703.4	$/oz	$0.10 per oz	$5.00	50 troy oz	NYMEX	PD
Silver	5.162	$/oz	.005 per oz	$25.00	5,000 troy oz	COMEX	PD
Gold	361.7	$/oz	.10 per oz	$10.00	100 troy oz	COMEX	PD
CBOT m ini-sized Gold	402.1	$/oz	.10 per oz	$3.32	33.2 troy oz	CBOT	PD
CBOT m ini-sized Silver	5.161	$/oz	.001 per oz	$1.00	1000 troy oz	CBOT	PD
CBOT 100oz Gold	402.1	$/oz	.10 per oz	$10.00	100 troy oz	CBOT	PD
CBOT 5000oz Silver	5.161	$/oz	.001 per oz	$5.00	5000 troy oz	CBOT	PD

Cont'd …

INTEREST RATE FUTURES

Contract	Sample Quote	Units	Tick Size	Tick Value	Contract Size	Exch.	Settle
30-Day Fed Funds Rate	92.005	0.005	0.005	$20.835	$5,000,000 FV	CBOT	CS
10-Year Municipal Note	100-16	1/32 point	1/32 point	$31.25	$100,000 FV	CBOT	CS
10-Year U.S. T-Note Futures	112-21+	1/2 of 1/32 point	1/2 of 1/32 point	$15.625	$100,000 FV	CBOT	PD
2-Year US T-Note Futures	107-192***	1/4 of 1/32 point	1/4 of 1/32 point	$15.625	$200,000 FV	CBOT	PD
5 Year T-Note Futures	100-21+	1/2 of 1/32 point	1/2 of 1/32 point	$15.625	$100,000 FV	CBOT	PD
30 Year U.S. T- Bonds	105-16	1/32 point	1/32 point	$31.25	$100,000 FV	CBOT	PD
Eurodollar	98.005	0.005	0.005	$12.50	$1,000,000 FV	CME	CS
1 Month LIBOR	98.005	0.005	0.005	$12.50	$3,000,000 FV	CME	CS

As you can see, here you have the Tick Size and Tick Value for all the major US Futures.

OK, let's see how this works in practice with an example on the ES M6 (E-mini S&P 500 Jun06)

Contract	Tick Size	Tick Value
E-mini S&P 500	0.25	$12.50

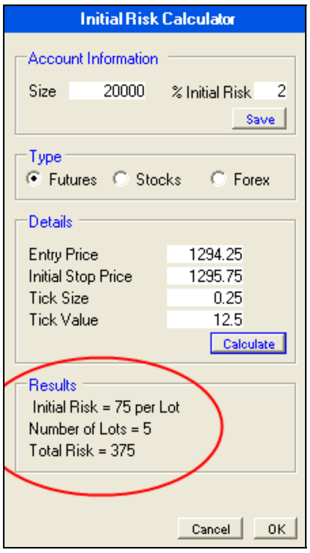
Here we have a Tick Size of 0.25 and a Tick Value of $12.5, these are the values you must use for the Position sizing calculations in MTPredictor

First we need to set our account size and initial risk per trade:

For this example let's assume we have a $20,000 trading account and wish to risk 2% per trade.

OK, now we can calculate how many lots we should trade for a specific trade set-up.

Let’s say for example we have a trade set-up on the ES that requires a trade entry at a price of 1294.25 and our protective stop was at 1295.75:



Once we have entered our Tick size (0.25 on the ES) and Tick value (12.5 on the ES) this module then calculates that we can trade 5 lots for a total initial risk of $375 (ignoring slippage and commission). This is just below our $400 initial risk (2% initial risk on our $20,000 account.)

As you can see, this not only helps you calculate how may lots you can trade on any particular set-up but also shows you how much you are risking on the trade. As you all know, keeping your initial risk small is the single most important aspect to any successful trading approach.

MTPredictor can also take this one stage further for you….

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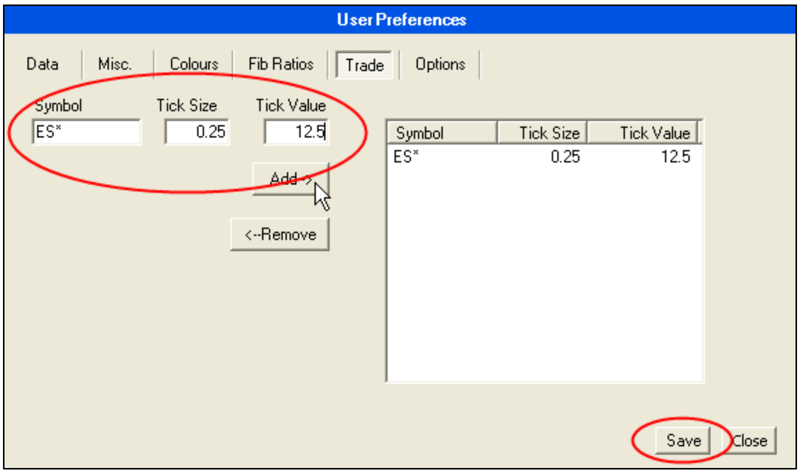
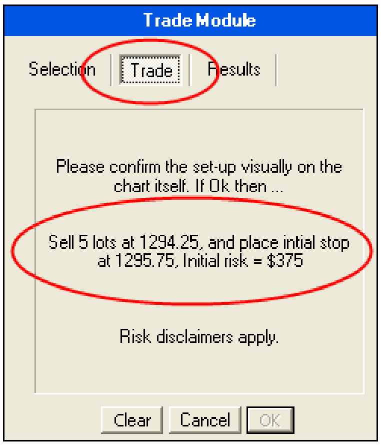
MTPredictor also allow you to put in these Tick size and Tick values into the User preferences so they are automatically available when you use the Trade module:



For this we use the same values from before – a Tick size of 0.25 and a Tick value of $12.5 for the ES. Notice how I use ES* so all contracts on the ES (for example ESM6, ESH6 etc etc) all use the same ES values. * is a "wildcard" and takes all characters available.

OK, now let's apply the analysis to the current set-up:

As you can see, this has not only placed all the normal analysis on the chart for us but has also placed the actual Entry Price and actual Stop Price values to use (this is where the 1 tick beyond values are used). This has also used our account value and initial risk value to calculate for us how many lots we should trade for this particular set-up.



For an initial risk of 2% on a $20,000 account with these trade entry and stop values you should be trading 5 lots for a total initial risk of $375, which is just less than $400 (2% of $20,000).

In other words, for each new set-up the number of lots traded will change BUT the overall initial $ risk will remain constant – this is what we mean by "**Position Sizing**". Your *position* is *sized* to keep a constant initial risk per trade.

In this way all your profits and losses will relate directly to each other. For instance, a profit of 5x the initial risk on a contract like the ES will relate directly to a loss of 1 risk unit on Coffee. So, over time your profits will be large and directly related to your losses on every market you trade. Only then can you make money over time by adhering to the fundamental principle of small losses and large profits. Without position sizing and keeping these variables constant, no matter what market you trade, this is impossible…and is why position sizing is the real Holy Grail of trading. There are very few traders who fully understand the importance of this and why so few traders can make money consistently over time.

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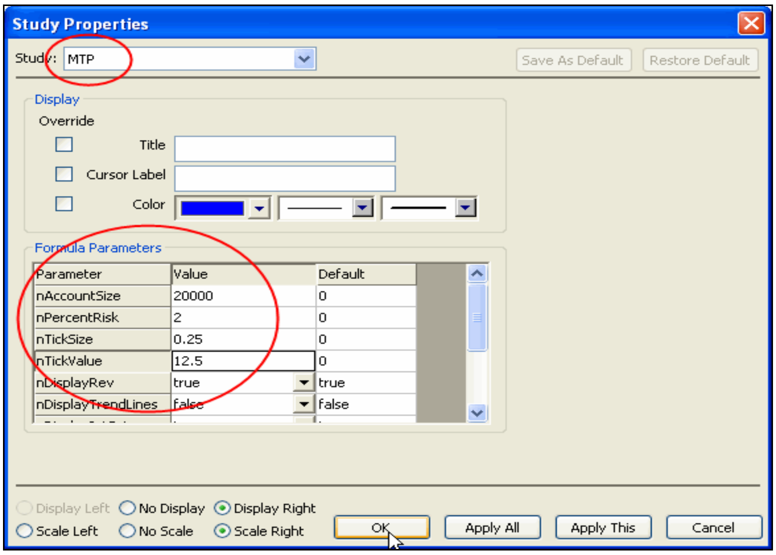
Efs's in eSignal®:

Let's see how this relates to the new efs files (MTP.efs) in eSignal®:



As per normal, here are the values to place in the efs files on this ES chart. Please remember that the Tick Size and Tick Value will be different for each market you trade so this efs file has to be set up correctly for each and every market.

Here is the chart:

Just as before, you are advised on the number of lots to trade and the total initial risk is calculated for you as well.

Eld's in TradeStation® 8.1

With TradeStation® 8.1 things are a little easier. The reason for this is that TS8 already "knows" the Tick Size and Tick value for each and every market, so all you need to enter is your $ account size and % initial risk:

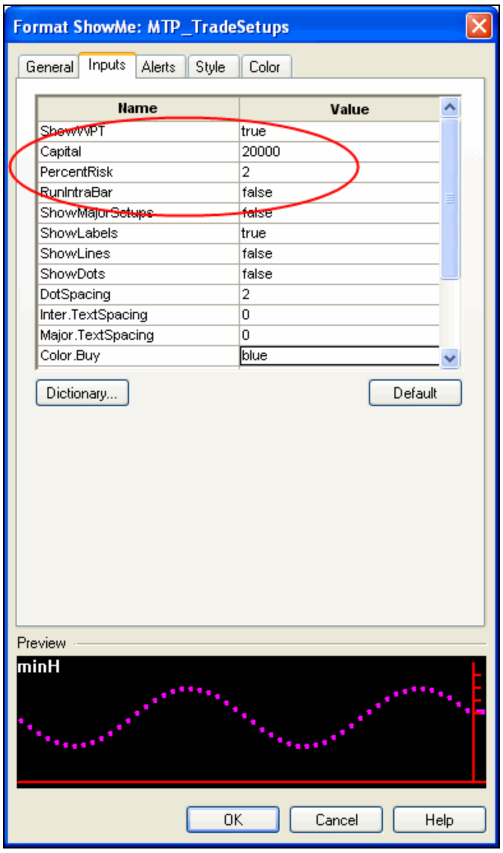


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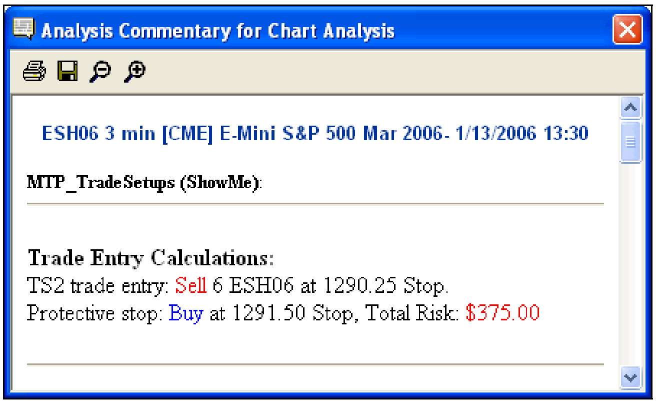
Chart:

Here, you are advised to sell 6 lots for a total initial risk of $375 on this particular trade:



As you can see, this is very easy to achieve - in fact, the software does all the hard work for you ☺

OK, so why is this Position Sizing stuff so important?

Well, on the ES trade you saw how you would have risked $375, so what would have happened if the trade had not moved as anticipated and you were stopped out for a loss ?

Well…you would have lost $375 excluding slippage and commission).

Let's now look at another trade on a different market, the E-mini Russell 2000® (ER2 in TradeStation8):

Here you can see that we had the same $ (2% on $20,000 account) initial risk on the trade of $360 (approximately the same as $375), but just look at the profit on the trade - roughly $2,200 or nearly 6x larger than the initial risk and 6x larger than the initial risk on the ES trade.

Just stop and think about this for a minute…

Each (and every) one of your trades can relate directly to each other, no matter what the market…in other words, each one of your profits is a direction proportion of each of your losses (and not just in pure $ terms). Only now can you truly have profits that are large and directly related to your losses. This is the only way to make money over time, and why it is so vital to understand and apply it to your trading…

Most traders stumble along blindly making profits and losses but have no idea what they actually mean.

Let's look at an example. Let's assume that you have just made a profit of $800 on your last trade. Do you have any idea how "good" this profit is ? To you, $800 is just that - $800. But what about if you had had to risk $1,000 to get that profit or…even worse…if your last loss was $1,000….. Now you are in the situation where you have large losses and small profits. I am sure I don't have to explain to you that this is not a sustainable situation and that this is the path to financial ruin.

OK, now let's assume you have read this help file and understand that you need to use position sizing to keep your losses small and, more importantly, in direct relationship to your profits. So let's assume that you still made your $800 profit but you only had to risk $200 to achieve this…or, put another way, your last loss was only $200.

Can you see the immediate difference here to your long-term profits and losses? Only now are your profits large in relation to your losses. I hope you can see that having large profits and small losses is far more sensible and is the way forward to make money over time.

This is what position sizing is all about – a way to keep a constant risk per trade so when your profits come through they are large but, critically, large in direct relationship to your losses.

This is the real Holy Grail of trading and is misunderstood and misapplied by the vast majority of traders…so please re-read this help file until you fully understand the concept and how to apply it to your trading.

As you can see, here at MTPredictor we fully understand this concept and have made it a fundamental part of the MTPredictor software, including the eSignal add-on efs files and TradeStation 8 add-on eld files. The automatic routines make it easy to fully utilise this important premise and will help add to your bottom-line trading results over time.

Continued on the next page . . .

Stocks

The situation for US Stocks in particular is slightly easier, mainly because most of them have a Tick size $0.01 (or 1c) and a Tick Value of 0.01.

For example, the current quote on Microsoft (MSFT) is 26.94. It can move up 1 tick to 26.95 or down 1 tick to 26.93 so for one share this mean an increase or decrease of $0.01 or 1c.

As such, US stocks are a lot easier to deal with than US futures.

Forex

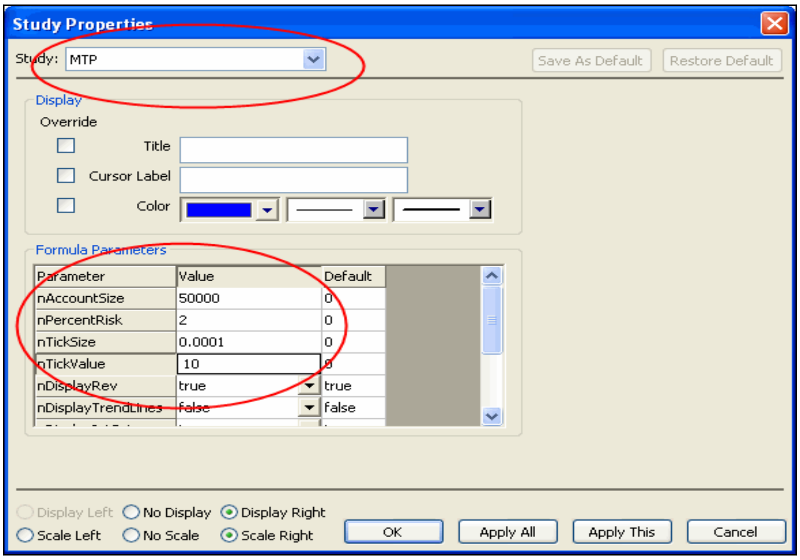
With Forex things are a little different…

Put simply, with Forex you can trade in multiples (or lots) of $100,000 worth of your chosen currency. And now there are also minis available, allowing you to trade in $10,000 units of your chosen currency. Therefore, *if* your chosen currency is against the dollar, for example EUR/USD; GBP/USD; AUD/USD; NZD/USD, then the calculation of how much each pip (or minimum fluctuation) is worth is easy

For example, on the EUR/USD, the minimum price fluctuation is 0.0001 so for a standard $100,000 lot the Pip value is $10 (100,000 x 0.0001).

This goes for any currency that is quoted */USD, i.e. against the US$.

So for the new eSignal efs file (MTP.efs) the inputs are easy:



Here we have Tick Size (minimum fluctuation) as 0.0001 and Tick Value as 10.

Please note, when using Forex the "Pip" value is the same as the "Tick value" for Futures, so just put the pip value in the Tick value box when you are working on a Forex Chart.

So let's see what this means on an example using a 2% initial risk on a $50,000 account.

EUR/USD 60 min example:

As you can see, this efs has calculated that you could have traded 3 lots (of the standard $100,000 lots) for a total initial risk of $840, using 2% initial risk on your $50,000 account.

So for a cross rate that is quoted against the dollar (*/USD) all you need to know is the minimum price fluctuation (Tick Size) - usually 0.0001 - and the Pip Value, which will be 10 for the standard $100,000 lot or 1 for the mini $10,000 lot.

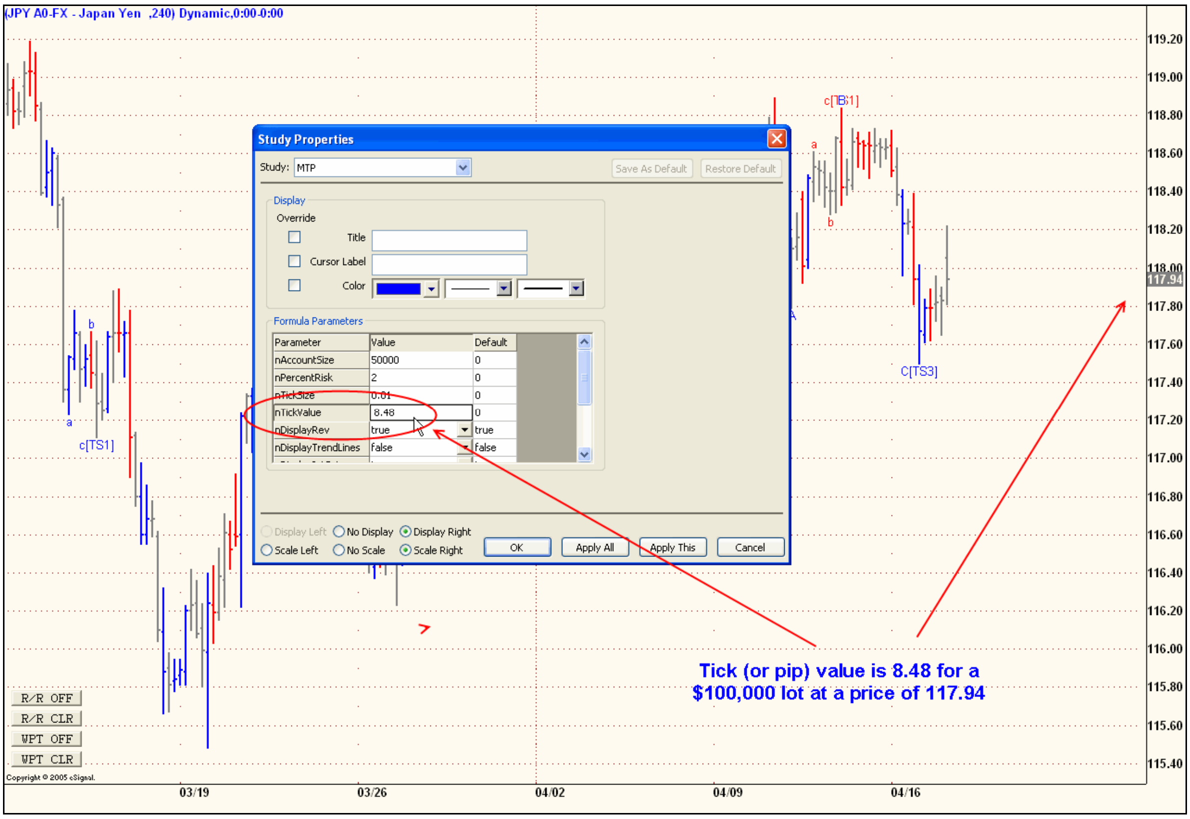
Easy isn't it …………… ☺

However, not all cross rates are quoted against the US$ base currency. There is also one important exception against the US$ as - the Japanese Yen. Here, the quote is commonly USD/JPY, or the inverse of what we have already seen.

So let's look at the USD/JPY first…

Because this quote is the other way round i.e. against the Yen rather than against the Dollar we need to get the pip values back into US$. To do this, we need the inverse of the current price of the USD/JPY.

Chart:



So *if* the current USD/JPY price is 117.94, the Pip Value for a standard $100,000 lot would be: (1 / 117.94) x 100,000 x 0.01 (minimum price fluctuation) = 8.48 in this example.

This may seem very complicated, but we can created Pip value calculator for you. This is available at: http://www.mtpredictor.com/pricing/pip2.html

Currency Pair	Price against the US$	Pip value per $1,000,000 Lot	Pip value per $100,000 Lot	Pip value per $10,000 Lot	Input Lot Size 10000 Update	Other currency pairs with the same $-pip value
*/USD	1	$100	$10	$1	$ 1	GBP/USD, AUD/USD, NZD/USD, EUR/USD
USD/JPY	117.94	$ 84.79	$ 8.48	$ 0.85	$ 0.84788875	EUR/JPY, GBP/JPY, AUD/JPY
USD/CHF	1.2500	$ 80	$ 8	$ 0.8	$ 0.8	EUR/CHF, GBP/CHF
USD/CAD	1.2000	$ 83.33	$ 8.33	$ 0.83	$ 0.83333333	EUR/CAD

Here you can see that all I had to do was put in the current USD/JPY price (117.94) and it calculated the pip value of 8.48 for me. Very easy indeed… ☺

So all you need to do now is put this into the efs along with the minimum price fluctuation, which is 0.01 on the USD/JPY. As you can see, this is very easy and only requires one additional step of calculation (or let the web site calculator calculate the pip value for you to use).

There is a very similar procedure with all other cross rates where the base rate is not in US$. Basically, we need to get the pip value back into the dollar equivalent by using the cross rate of the current base currency back to the US$.

In practice this is easy as all you have to do is put the current price of the base currency against the dollar into the web site calculator. This then gives you the current $ pip value to use:

Let's take a look at another example, this time on the EUR/CHF:

Currency Pair	Price against the US$	Pip value per $1,000,000 Lot	Pip value per $100,000 Lot	Pip value per $10,000 Lot	Input Lot Size 10000 Update	Other currency pairs with the same $-pip value
*/USD	1	$100	$10	$1	$ 1	GBP/USD, AUD/USD, NZD/USD, EUR/USD
USD/JPY	117.94	$ 84.79	$ 8.48	$ 0.85	$ 0.84788875	EUR/JPY, GBP/JPY, AUD/JPY
USD/CHF	1.2881	$ 77.63	$ 7.76	$ 0.78	$ 0.77633724	EUR/CHF, GBP/CHF
USD/CAD	1.2000	$ 83.33	$ 8.33	$ 0.83	$ 0.83333333	EUR/CAD

Here you need the current value of the USD/CHF, as the CHF is the base currency in our EUR/CHF example so this is the cross rate of the USD against the CHF we need to get the EUR/CHF pip value back into our standard USD price.

So at the current USD/CHF price of 1.2881, the pip value we need to use in our EUR/CHF trade is 7.76 (as our EUR/CHF has the same $ Pip Value as USD/CHF).

As you can see, some care is needed when you trade cross rates that do not have the USD as their base currency. Just remember that you are trading in standard $ lots of either $100,000 or $10,000 no matter what your cross rate is, so you always need to get your current pip value back into a $ value.

Continued on the next page . . .

As a last comment on trading cross rates that do not have their base currency in USD, please understand and be aware that the cross rate back into US$ will also be continually changing. This means that your "pip value" will change from trade to trade as well.

This is not a problem if you only trade cross relates against the USD, with the USD as your base currency as the pip values will remain static.

Thanks and good trading . . .

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