# Atelier Web Trader Tookit (for MT4 and MT5) Version 1.1

# **USER MANUAL**

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#### 1 Introduction

Trading is a game of probabilities. Each trade may end either in a win or in a loss. The Retail Trader plays against Big Players - Big Banks and other Financial Institutions, Governments, and even Brokers (just for reasons of its proximity with the Retail Trader). By the Law of Large Numbers, Big Players will always win in the end, i.e, trading is not a win-win game, Big Players win when other traders lose. Big Players have much more information, resources and money to drive the prices where they want, or, as is the case for some brokers using a set of unfair tricks. In general, Big Players will endeavor to move prices where most other traders were less expecting.

Big Players also play against each other and against other commercial players, in particular against Hedge Funds, small banks and big investors. In the great order of things, the Retail Trader is not important in volume for the Big Players, except for your broker,

The Retail Trader can only be profitable by acquiring a statistical advantage. This requires knowledge and a solid strategy.

These days there are many sources of knowledge readily available. Unfortunately, many of these sources are not reliable, or provide misleading versions of otherwise helpful information, *who tells a tale adds a tail*. Even then, they are useful, in the sense that can motivate a continued search for better sources of knowledge. This is the reason it takes time to be able to build a profitable strategy.

There is no unique best strategy, although all good strategies have a single point in common:

• Risk Management.

Again, trading is a game of probabilities. Like a professional poker player, the Retail Trader should not afford gambling instincts. He is a Speculator.

Speculation entails gathering rational information to form plausible conjectures. Gambling, on its side, is obeying the gut feelings.

When Speculators have the capability to form plausible conjectures, they are playing with the odds. Gamblers, on their side, may have a winning strike, but when they continue they will lose, this is as granted as casinos never losing in the long run.

#### 2 Program

#### 2.1 Overview

AW Trader Toolkit offers an assortment of tools to help Retail Traders become *consistently profitable*.

Be occasionally profitable is possible, Every Retail Trader has winning strikes, even the

novice may experience beginner's luck. Soon or later, many Retail Trader will conclude that trading is a game. In my opinion, it is, but is neither a game of chance like the bingo nor a game of pure skill like the chess. It is in between, it is more like a game of Poker played by professionals (so, it is a game of skill with elements of luck), and I will tell you my reasons.

- Neither Poker players nor traders can guarantee any outcome. Poker players don't know each player's cards, Retail Traders will never be completely sure where the market will move next. In Poker, card distribution is random. In trading, market moves depend on many uncontrollable factors (unless we are a Big Player, like a Big Financial Institution or a Government).
- This means that, Retail Players have to handle their action in a probabilistic way.
- 2. Risk management is crucial.
- 3. Psychology is very important. Not only the state of mind or stress of the Retail Trader but, most importantly, the psychology of those that will earn when Retail Trader loses. In trading, Big Players, including brokers, earn when you lose. Governments provide liquidity to other Big Players to play against all the other classes of players, including the Retail Trader. In the end, the big ones will always win, unless the market collapses. They may not win against a bunch of Retail Traders, but they will win against the whole group of Retail Traders. More than 90% of Retail Traders will lose 90% of their accounts in 90 days at most. This is called the 90-90-90 rule.

Given this state of affairs, how can a Retail Trader, wearing his/her Speculator glasses, survive, namely a Trader that uses popular platforms like MT4 or MT5? In my views, these are the general lines:

- 1) Gather rational information to form plausible conjectures.
  - a) Fundamental Analysis This include Economic Indicators like GDP, Inflation, Retail Sales, NFP and others. The latest Reports on this data, constitute what we call the News. Be aware, that there are massive pre-News manipulated misinformation, so this should be taken with a big grain of salt, but never disregarded at all. There are some Forex strategies set to take advantage of the fake News. Most brokers forbid them to protect their customers (actually, to protect themselves as well).
  - b) Use Chart Indicators, These assume that all important information about a trading instrument can be taken from its current and historical prices. Truly, something can be used in order to infer what to expect in the future otherwise prices would move in a completely random walk and they don't. However, most people use indicators and fail. Brokers provide teaching sessions about the most popular indicators, and their business is not to help traders succeed. For short, there are literally thousands of Chart Indicators. Most of them are misleading. However, some are indeed useful.
- 2) Price Action. This is an intuition of market prospective moves, expecting to identify trading biases, mostly through naked eye observation of chart patterns (but many times with the help of Chart Indicators).
- 3) Expert Advisers (also known as Trading Robots), EAs for short. They can be useful when working to pursue a clearly defined and solid strategy and are kept under close supervision. I believe, one day a perfect EA will be available in the marketplace. Nowadays, most people end blowing their accounts (hopefully cents accounts) when using EAs.

How can AW Trader Toolkit help in this context? AW Trader Toolkit approach acts on three fronts:

- 1. Provide a Dashboard of the most essential information needed to take a decision.
  - 1.1. Relative Currencies Strength, obtained from the Major Pairs and their Crosses. Only eight currencies are actively traded in the Forex Market and the trader should



mostly focus on them. So-called Exotic Pairs don't have good liquidity, spreads are high and tend to be easily manipulated. Of course, like with most other things, there are sometimes good opportunities with Exotic Pairs, but this falls outside our scope.

The relative strength of the Major Currencies show long-term, medium-term and short-term patterns. A shorter term pattern that disagrees with a longer term pattern is probably temporary. Be aware that long term Relative Currencies Strength positioning obey to Monetary Policies. For example, some Government may feel desirable to make its currency weaker in order to facilitate exports - and it has the instruments for that. Medium-term relative Currency Strength respond to Economics barometers. Short-term (up to a few weeks) is the main battlefield for the Big Players manipulation.

More details will be provided later, in the Currency Strength and Strategy sections.

1.2. Correlation between Instruments. It is neat to be able to trade Instruments other than Forex. Metals, Energy, Indices and even Agricultural Commodities are examples.

Many instruments' prices are correlated between themselves, and most commodities are correlated in the International Markets with the USD strength, simply because they are priced in USD. All respond to a change in the USD Relative Currency Strength (sometimes it is assumed that the DXY index is a true measure of the USD strength, but this index is more than 95% negatively correlated with the EURUSD pair, so DXY will change when the EUR changes and the USD stays stable). Sometimes, the adjustment is delayed, which provides a great opportunity for traders. On their turn, some currencies strength depend on other Instruments categories' prices. Oil prices affect CAD and YEN, Gold and Indices affects AUD and NZD, Oil prices respond to USD Currency strength changes and Indices are affected by Oil Prices. The big maestro behind the USD price moves is the FED. Big Financial Institutions, OPEC and many other organizations have room to play and manipulate within the FED established limits. The Retail Trader will do better when endeavors to understand the story line.

- 2. Risk Management. Like a professional poker player, the retail trader should manage carefully his funds. Poker players sometimes go All-In, but if his bankroll is the same as all his bank resources, this may end in a catastrophe, A good rule of thumb for poker is to have enough funds for 50 buy-ins, In trading, there are a few rules of thumb, but there is more to it than simple rules of thumb, we believe. The relevant chapters for this matter are Risk Management and Equity Simulator.
- 3. Information and Utilities. We reserved this section for collateral and complementary tools.
  - 3.1. Equity Simulator This is a very important tool for Risk Management understanding. Is it better to have a Low Win Rate on a High Reward to Risk setup or the inverse? Most literature recommend the first option. Actually, the answer may dependent on the exact market conditions and the trader's own (tentatively objective) appraisal of his conjectures. This subject will be elaborated <u>here</u>.
  - 3.2.Symbol Specifications I think this table is useful, namely to have a comparative view of spreads and other properties of interest. The table will also spot some types of potential bugs in the specifications and mark them with a yellow background.
  - 3.3. Trading Hours Many traders have difficulty in ascertain when the major Stock Markets sessions open and close in their own local time hours. It is not as easy as it appear, especially when we want to take into account Daylight Savings Time.

### 2.2 StartingUp

This is all you need to know to start using the software.

- 1) In MetaTrader, under Tools/Options/Experts Advisors, tick:
  - a) Allow Automated trading
  - b) Allow DLL imports. (*Note: AW Trader Toolkit will only import Operating System DLLs*)
- 2) In MetaTrader, under Tools/Options/Charts, you don't need to set high values for Max bars in history and Max bars in chart. AW Trader Toolkit will work well with the minimums.

3) Load into the Market Watch window of MT4/MT5 all the 28 Major and Cross Currency Pairs. Without this you will not be able to use the Currency Strength tools which are a cornerstone of the system. It is recommended (but not compulsory), that you load as well, if available, the USDSEK pair. This will allow the calculation of the DXY index, when it is not supplied by the broker. If USDSEK is not available as well, an estimation is done and can be considered good enough. The 28 Major and Cross pairs are: AUDCAD, AUDCHF, AUDJPY, AUDNZD, AUDUSD, CADCHF, CADJPY, CHFJPY, EURAUD, EURCAD, EURCHF, EURGBP, EURJPY, EURNZD, EURUSD, GBPAUD, GBPCAD, GBPCHF, GBPJPY, GBPNZD,

GBPUSD, NZDUSD, USDCAD, USDCHF, NZDCAD, NZDCHF, NZDJPY, USDJPY Some brokers use suffixes and prefixes on the pair names, AW Trader Toolkit will figure that out and it should work the same for you.

- 4) Install the AW Trader Toolkit Bridge (AWTTBridge.ex4 for MT4 or AWTTBridge.ex5 for MT5). This is done in the usual manner for MetaTrader EAs, i.e. copy the Bridge to the Experts folder, or one of its subfolders. It will appear in the Navigator window of the platform after you refresh or restart the platform. Note that the Bridge cannot be considered an EA, but the way to install it is the same used for EAs. Now, pay attention to the following:
  - a) Select any instrument that has reasonable amount of liquidity and install the EA on it. Of course, EURUSD is always a good choice but most others will do.
  - b) Install only one (1) copy of the Bridge on the platform. Avoid changing the Time Frame of the Chart where you installed the Bridge (\*).
  - c) There is no configuration or input needed for the Bridge.
- 5) Launch AWTT.EXE and pull the Connect Bridge button, if you see the Server/Account Number on the list of the Monitor tab. If you don't see, the probable reason is that the Bridge is not installed, so install it. For future trading sessions, you will need to do this step only, unless you uninstall the Bridge from the platform (if so, do step 4 first)..
  - $\circ\,$  Some Tools from the Utilities tab do not need a connection to the Bridge to operate.
- 6) Our software supports any number of MT4 (or MT5, depending on the version) platforms installed on the computer, and licenses are per Seat (each Seat is a computer, so you can connect to many platform on that computer with a single license). For each platform, repeat steps 1) to 5). You can use multiple platforms (even at the same time) either by selecting the one you want from the AWTT.EXE combobox or by launching multiple instance of AWTT.EXE. The platform you connected with will be shown at the bottom of the Monitor tab of AWTT.EXE after the connection.
- 7) Do not attempt to establish connections from AW Trader Toolkit to the platforms when there is no Data Feed for the currency pairs or Trade is not available for some reason. This may happen, for example, during weekends and in some holidays (but not for all brokers).

Note:

(\*) Changing the Time Frame does restart the Bridge, cleaning all variables and structures. This is a characteristic of the MetaTrader platforms. While the AWTT.EXE is able to deal with that, it will need to self-reset. So, try to avoid this.

### 2.3 Risk Management

#### 2.3.1 Position Calculator

The Position Calculator works, in general terms, in much the same way other position calculators you have seen do. In addition, we took special care to make it reliable for Instruments other than Forex, not only because contract sizes may vary from broker to broker but also because the type of calculation may vary with the contract type itself.

Position Calculator	Place SELL Order
Account Currency Account Equity Roll Spreambage USD 113005.28 Cont change Equity Spream (pts) Spread (pts) 20	Symbol: ELRUSO SBLL ELW Lot Stee 0.05 Price 1.135226 2 Law 2 1.19425 T2 1.15721 2 Law
ATR Time Franc	Connent: AWTT Mage Number: 7728111 Expres In (m) 120 20 Don't change exprast 20 Pending (checked) 20 Limit (checked),61xp Order
Clear Prices     Lot Size Copy: D.85     SL Copy: 1,19525     TP Copy: 1,18771      NewIts:	Close All Magic
of Sec 0.85 3: Value 0.01327/TP Value: 0.01327 3: Pixel 1.16759 TP Pixel 1.15440 3: Pixel 1.16759 TP Pixel 1.15440 3: Pixel 1.16759 TP Pixel 1.1523 Pixel at TP:1525 Pixel 2.1	
Ner 1911: 13. Proce: 1. 19405 TP Proce: 1. 1977) Lans et Sc. USD - 1143, 31 Profit et TP: 1950 1112,71	
	Init Resolve Position

Position sizing is based on the ATR (Average True Range), which provides a figure for the variability of the candle sizes of a certain number of periods in recent history for a certain selected Timeframe. On our ATR feature the variability is taken for 2 different periods and the largest of both is the one used.

A price point at 3 times the ATR value (for a certain timeframe) from the Entry Price is considered very safe for placing the Stop Loss (a value 2 times the ATR is many time safe enough). This value can be reduced if the market is trending in our favor. We can use the ATR as well to obtain the Take Profit Price. Of course, we can take into consideration Support and Resistance zones to fine-tune the ATR proposal, if we wish. The Position Calculator allows user input of the "ATR value", although its real meaning will differ from the originally intended. Here, you must input a number with full decimal digits (neither pips or points). Note that the ratio (ATR\*(ATR TP Multiplier))/(ATR\*(ATR

SL Multiplier)) is the Reward to Risk Ratio (R/R) ratio.

The values for ATR TP Multiplier and ATR SL Multiplier will much depend on your personal characteristics as a trader. Traders who prefer to compensate a low Win Rate with a high Reward to Risk Ratio, will set, for example, ATR TP Multiplier to 10 and ATR SL Multiplier to 2. This will provide a R/R ratio of 5, and make the strategy profitable even with a Win Rate of only 25%..On the other hand, scalpers and daily traders in general, that look for a high turnover of their capital may opt for R/R below 1 while looking for a Win Rate well above the toss the coin probability. Both strategies can be tested on the Equity Simulator.

Risk Percentage is another critical input for the Position Calculator. Most people recommend 1%, and never go over 2% Risk. I tend to agree with this opinion. Traders that use the strategy of high R/R, low Win Rate need to be aware of the possibility of long losing strikes. Here a Risk Percentage of 0.25 to 1 % should to be considered to prevent the possibilities huge drawdowns or even the account to be blown up.

When we are looking to place Pending Orders we should clear the values for the Bid Price and Ask Price boxes and enter our own values. We can clear both values by pressing the Clear Prices button. When we fill in the price in one of the boxes, double clicking on it, the same price is copied to the other box. This may be handy, if the Spread is not high and the Bid and Ask prices can be considered the same for calculation purposes.

Using the buttons Lot Size Copy, SL Copy and TP Copy, the respective values are copied to the clipboard (for any purposes you might have in mind).

So, to use the Position Calculator proceed as follows:

- 1. Connect the Bridge (AWTTBridge.ex4 or AWTTBridge.ex5), if not done yet, because we need data feed from MetaTrader for the instruments.
- 2. On the Position Calculator tab, press the lnit button to fill in the Instruments combobox and select an instrument.
- 3. Select the Time Frame and adjust as need the ATR Multipliers.
- 4. For Pending Orders, change the values for Bid Price and Ask Price.
- 5. Check the Buy checkbox if it is a Buy or uncheck if it is a Sell.
- 6. Select the Time Frame according to the length of time you estimate for your trade.
- 7. Select the multiplier values for the SL and TP. These values will be multiplied for the ATR that will correspond to the selected Time Frame.
- 8. Enter a value for the Risk Percentage.
- You may change Bid Price/Ask price if you want a pending order. Remember that double clicking either the Bid or the Ask Price box will copy the value to the other box.
- 10. Confirm that the Spread value is acceptable, in particular if you are trading in the small Time Frames.
- 11. Tick the Buy checkbox if this is a Buy, otherwise uncheck it.
- 12. Finally, press the Resolve Positions button. Results will be displayed and accordingly reflected in the Place Order panel after you press the Resolve Positions button.

After you press the Resolve Positions button, the projected potential Loss and Profit are reported as well (take into account that rounding or slippage may slightly diverge displayed values from the calculated values).

If you want to Place an Order, follow to the <u>Placing Orders</u> section.

#### 2.3.2 Kelly Criterion Method

The Kelly Criterion Position Calculator is based on a mathematical formula that provides the optimal trade size position that maximizes the expected average capital growth. It is Mathematics, so it is correct without any doubt.

But like most things in trading, the *devil may be in the details*. Still, used with precaution and conscience it can be useful. Many traders were or are using it with success, including Warren Buffet,



There are 2 keys inputs:

- The probability of winning a trade must be known beforehand. Of course, this is impossible, it is not a coin tossing or dice rolling exercise. But estimates can be attempted from historical data and other hints (this is how betting firms do to make a living). Estimating the market probably of uncertain events is difficult because historical data refers to specific contexts. Anyway, as mentioned before many traders use the Kelly Criterion, so they have to come out with probability estimates.
- 2. How much we gain when we win a trade and how much we lose when the trade is a loss. What matters here is the quotient between these two. So, this is easy when we use Stop Loss and Take Profit, like we do with our calculator. SL and TP are calculated based on the ATR and respective ATR Multipliers, as mentioned <u>here</u>. The reasoning behind is that we assume to have a certain winning probability (WP) to hit the TP (and then 1-WP probability of hitting the SL). Some people may dispute this way of calculation, but I am yet to see another one based on something concrete.

Note that, like in a fair coin tossing exercise, where the probability of heads is 50%, the only guarantee you have is that in a very large number of coin flipping events the number of heads will be approximately the same as the number of heads. It may well happen a large strike of tails in between. The same may happen while using the Kelly Criterion. So, traders are strongly recommended to use only a small portion (5%, for example) of their Account Equity when calculating positions using the Kelly Criterion. For that smaller investment, the reassurance is that their bet is mathematically optimized, given inputs from points 1 and 2 above are correct.

Before continuing, I am in no way defending the Kelly Criterion. In general, the normal Positions Calculator is much more safe.

To use the Kelly Criterion Position Calculator proceed as follows:

- 1. Connect the Bridge (AWTTBridge.ex4 or AWTTBridge.ex5), if not done yet, because we need data feed from MetaTrader for the instruments.
- 2. On the Kelly Criterion Position Calculator tab, press the Init button to fill in the Instruments combobox and select an instrument.
- 3. Select the Time Frame and adjust as need the ATR Multipliers.
- 4. For Pending Orders, change the values for Bid Price and Ask Price.
- 5. Check the Buy checkbox if it is a Buy or uncheck if it is a Sell.
- 6. Set the amount of your Account Equity! You don't have to consider the whole Equity of your Trading Account, you can (or better, you should) consider only a small fraction of it.
- 7. Select the Time Frame according to the length of time you estimate for your trade.
- Select the multiplier values for the SL and TP. These values will be multiplied for the ATR that will correspond to the selected Time Frame. Note that a minimum SL multiplier of 2 is recommended.
- 9. Enter your estimated Probability of Win.
- 10. Confirm that the Max % Equity per Trade is what you want. This acts as a second filter, in addition to the amount you set for the Account Equity (point 6, above).
- 11.You may change Bid Price/Ask price if you want a pending order. Note that double clicking either the Bid or the Ask Price box will copy the value to the other box.
- 12.Confirm that the Spread value is acceptable, in particular if you are trading in the small Time Frames.
- 13. Tick the Buy checkbox if this is a Buy, otherwise uncheck it.
- 14. Finally, press the Resolve Positions button. Results will be displayed and accordingly reflected in the Place Order panel after you press the Resolve Positions button.

If you want to Place an Order, follow to the Placing Orders section.

#### Notes:

- Once again, keep in mind that the whole Kelly Criterion assumes a long stream of trades. Even if the estimated probability is correct, you may face a Loss Strike that will wipe out your account. Hence, put only a small part of your Trading Account Equity in the Account Equity box (for example, 5%) and place a safety value on the Max % Equity per Trade.
- Bear in mind as well, that you must use SL and TP because all the assumptions are based on their existence, Do not change SL and TP after placing the order. Always remember that all Trading is probabilistic. Think carefully before placing the order and once you click the Place Order button let it go for good. If your assumptions were correct, the profits will outpace the losses (at least after a number of trades).

#### 2.3.3 Placing Orders

Before Placing an Order, you must calculate the position according either with the <u>Position Calculator</u> or the <u>Kelly Criterion Method</u>. But you can manually change most values after that, if you wish.



To change between a BUY ORDER and a SELL ORDER you click the Buy checkbox on the top right (you can as well click the Buy checkbox on the left of tabsheet). Always Resolve the Position after changing from BUY ORDER to SELL ORDER.

If you want a Market Execution Order (i.e. at the best current market price) uncheck the Pending Order checkbox. If you want a Pending Order, make sure you check the Limit checkbox for Limit Orders or uncheck it for Stop Orders. For Pending Orders, you should set a value in minutes after the order is placed, where it will be canceled by the system. By default, the value will be the same as the time frame for which the Position was calculated. The default is the recommended value, because conditions may change significantly after that.

In the Magic Number box insert any number (between 0 and 2147483647) that uniquely identifies that order (or a group of orders). This number will be used in case you want to close some order, or a group of orders, by clicking the Close All Magic button.

In general, you should keep the Use SL and Use TP checkboxes ticked, because the Positions were calculated based on these values. Of course, you can clear these checkboxes and monitor visually, in particular if you have reasons to suspect of Stop Loss hunting.

When everything has been double checked, click the Place Order button. If the order is not placed look for the reason on the Progress Report Monitor Window.

### 2.4 CurrencyStrength

Since long I had the *feeling* that a good Currency Strength Meter is a cornerstone tool not only for the Forex Trading System but also for many other Financial Markets. The more money I was losing along the way trading the Financial Markets the more convinced I became of that. Unfortunately, I never found a satisfactory Currency Strength Meter. My research for a good Currency Strength Meter led me to talks with a few people to gather ideas and then I decided to roll my own.

The AW Trader Toolkit Currency Strength Meter was developed last year and inserted into a software I was developing for internal usage only. It was similar to AW Trader Toolkit but in a DLL launched from the MetaTrader application. I abandoned the DLL because when we add feature after feature it hangs a lot and sometimes crashes. However, the Currency Strength tool together with the Correlations tool have made the whole difference to me and even more to some close people more talented and tailored for trading than I am,

There are two Currency Strength tools. The first one, that I call Period Currency Strength, provides the relative strengths at Close Candlestick time (except Candlestick 0, which shows the ongoing status) for all Time Frame periods from 5 min to 1 week. On them you can spot short and long term trends for the currencies. The other one, which I call Instant Currency Strength, attempts to evidence impulses for currency reordering. These may, or may not, reflect on the Period Currency Strength, all depends on how persistent they are.



#### The Period Currency Indicator 5 Min Time Frame

Instant Currency Strength



On the SkyBlue color panel, we have:

- The Time Frame selector
- The Get Currencies Strength button
- **The Automatic Update checkbox**: When checked, it refreshes the chart every 15 seconds (or 7 seconds for the Instant Currency Strength).
- The Interrupt button. Just in case it is stuck, but rarely happens. It may happen, for example if there is no data feed.

#### Notes:

1. To use the Currency Strength you need to load all 28 Major and Cross Pairs into the Market Watch window of MT4/MT5. It is recommended (but not compulsory), that you load as well, if available, the USDSEK pair.

These are the 28 pairs: AUDCAD, AUDCHF, AUDJPY, AUDNZD, AUDUSD, CADCHF, CADJPY, CHFJPY, EURAUD, EURCAD, EURCHF, EURGBP, EURJPY, EURNZD, EURUSD, GBPAUD, GBPCAD, GBPCHF, GBPJPY, GBPNZD, GBPUSD, NZDUSD, USDCAD, USDCHF, NZDCAD, NZDCHF, NZDJPY, USDJPY,

Some brokers use suffixes and prefixes on the pair names, AW Trader Toolkit will figure that out and should work the same.

2. This tool depends on the MT4/MT5 History Center Contents. On MT5, the History Center is not directly visible but this is of no concern for us. Since we are looking for History of 28 pairs on different Time Frames, it can take a minute or 2, eventually more, to download or refresh the History from the broker. It is better to tick the Automatic Update checkbox. This will keep pumping until the chart can be displayed. After the initial pumping for each time frame, next it becomes much faster because MT4/MT5 caches the contents for some time.

### 2.5 Correlations

Many Financial Instruments are correlated either within their own categories or with instruments from other categories. Some correlations don't last long, others persist for a long time, others are apparent only after a certain latency of period. Some correlations (either positive or negative) are well known, like DXY with Gold or USDCAD with Oil. But, as always, the devil is in the details - there is not a good correlation at all times.

Indices correlate well with a number of currency pairs and even with crypto currencies (in spite of being heavily manipulated),

Something to take from this is that we may look for divergences between the expected correlation on a given Timeframe and the direction the prices are taking on the pairs involved. If no particular reason (in particular a fundamental one) for that exists, we can assume a temporary asynchrony and that the correlation will tend to be restored.

	AUDCAD	AUDCHIF	AUDJPY	AUDNZD	AUDUSD	CADCHI	CADJPY	CHFJPY	EURAUD	EURCAD	EURCHF	EURGBP	EURJPY	EURNZD	EURUSD	GBI
EURCHF	0.261	0.541	0.477	0.438	0.404	0.619	0.463	-0.036	-0.048	0.312						
EURGBP	-0.065	-0.182	-0.142	0.074	-0.072	-0.238	-0.154	0.039	0.349	0.510	0.207					
EURJPY	0.174	0.272	0.654	0.461	0.509	0.264	0.796	0.735	0.056	0.372	0.651	0.172				
EURNZD	-0.666	-0.704	-0.523	0.250	-0.529	-0.429	-0.177	0,202	0.916	0.657	0.132	0.378	0.242			
EURUSD	0.139	0.038	0.341	0.349	0.515	-0.089	0.378	0.564	0.242	0.647	0.505	0.315	0.772	0.382		
GBPAUD	-0.759	-0.718	-0.600	-0.199	-0.639	-0.344	-0.200	0.091	0.735	0.211	-0.188	-0.377	-0.061	0.636	0.020	
GBPCAD	0.058	-0.094	-0.012	0.116	0.039	-0.222	-0.064	0.142	0.134	0.324	0.054	-0.647	0.142	0.176	0.225	0.6
GBPCHF	0.241	0.539	0.459	0.270	0.349	0.642	0.458	-0.061	-0.323	-0.197	0.548	-0.704	0.324	-0.211	0.102	0.1
GBPJPY	0.187	0.347	0.650	0.356	0.478	0.378	0.783	0.607	-0.180	-0.019	0.414	-0.533	0.741	-0.035	0.449	0.2
GBPNZD	-0.619	-0.570	-0.418	0.207	-0.475	-0.253	-0,061	0,173	0.664	0.290	-0.011	-0,354	0,122	0.731	0.158	0.9
G8PUSD	0.169	0.171	0,412	0.269	0.515	0.105	0.459	0,476	-0.049	0.185	0.294	-0.509	0,560	0.060	0.656	0.3
NZDCAD	0.864	0.665	0.531	-0.189	0.648	0.136	0.013	-0.115	-0.765	-0.119	0.039	-0.104	-0.063	-0.825	-0.040	-0.f
NZDCHF	0.754	0.936	0.731	0.003	0.695	0.722	0.400	-0.213	-0.856	-0.434	0.411	-0.222	0.117	-0.848	-0.090	-0,t
NZDJPY	0.695	0.799	0.948	0.133	0.830	0.557	0.764	0,407	-0.734	-0.278	0.370	-0.181	0.560	-0.666	0.253	-0.1
NZDUSD	0.764	0.715	0.778	0.025	0.927	0.338	0.463	0.249	-0.704	-0.129	0.260	-0.109	0.366	-0.678	0.418	-0.6
USDCAD	-0.194	-0.361	-0.617	-0.273	-0.712	-0.397	-0.734	-0.530	0.222	0.074	-0.380	0.057	-0.663	0.106	-0.712	0.1
USDCHF	0.072	0.418	0.028	-0.025	-0.228	0.621	-0.028	-0.655	-0.324	-0.471	0.265	-0.183	-0.317	-0.330	-0.697	-0.1
USDJPY	0.088	0.369	0.540	0.222	0.076	0.519	0.697	0.356	-0.259	-0.321	0.289	-0.174	0.467	-0.167	-0.201	-0.1
USDSEK	-0.656	-0.558	-0.741	-0.398	-0.883	-0.196	-0.501	-0.435	0.470	-0.131	-0.340	0.185	-0.564	0.298	-0.636	0.3
NAS100US	-0.408	-0.585	-0.180	-0.101	-0.095	-0.516	0.110	0.656	0.517	0.341	-0.264	0.241	0.314	0.468	0.506	0.3
SPX500US	-0.432	-0.525	0.125	-0.102	-0.074	-0.385	0.211	0.654	0.496	0.275	-0.177	0.234	0.373	0.447	0.514	0.3
<		<i></i>	-	1.	-		<i>a.</i>		1.			10		10	1	>
Time Frame																-
OiMo	OsMo	015Mn (	30Mn C	1Hour O	Hor Os	Day O11	Neek 🖲 1 M	onth .	Internupt	Ready		Get Cor	relations	Requester	d count: 500	-
1.00	23		2			19.00						1		Effective	e count:	68

In our table, we mark with colors the degree of correlation:

Absolute Value of Correlation	Color
>0.90	Red
>0.80	Purple
>0.70	Blue
>0.50	Yellow
<= 0.50	White

In Financial Instruments, we consider that an absolute value above 0.80 is considered a good correlation, above 0.7 but below 0.8 is considered moderate, and above 0.5 but below 0.7 deserve some attention. Values under 0.50 are very likely not useful for our purposes. We should concentrate mostly on correlations with an absolute value above 0.90 for any particular TimeFrame, these correlations are very significant.

The number of data points is important, because the more points we use the more confidence the correlation estimate will deserve (unless there are dramatic variability in certain periods). By default, the Correlations tool will attempt to use 500 consecutive price points to calculate the correlations (but the trader can change it in Requested Count box). In particular for High Time frames (namely, weekly and monthly) this value may be excessive and the tool will use what is available and report in the Effective Count box.

#### Important:

- Avoid placing too many symbols in the Market Watch window of MetaTrader. Some brokers have problems providing History Data for a huge number of symbols at the same time. Notwithstanding that, AW Trader Toolkit is able to correlate up to 199 symbols from the Market Watch window, providing the broker complies with its part. With most brokers that we tested with, a number less than 50 symbols in the Market Watch window does not present a problem.
- 2. Note that the first time we calculate the Correlations for a certain Time Frame, the process of Updating the History, can take a while. If you feel it is taking too long (let's say, more than 1 minute) you can have a look at the Progress Report for possible error messages,.

### 2.6 EquitySimulator

The probability of losing money in a series of trades is never zero. No matter how proficient you are, nothing is certain, nothing can be taken for granted. However, we can improve the odds of success, because, after all, we are in a game of both luck and expertise.

The Equity Simulator is an educational tool. Take your own conclusions, don't fully trust the gurus that foist rules of thumb into the followers. The gurus may well believe what they teach, but keep in mind, their main source of income are usually broker affiliation and mentoring, not trading.

On the Equity Simulator there are 2 parameters, and associated strategies, to keep a good eye on: the Win Rate and the R/R. If the Win Rate is low but the R/R is high you can be profitable. You will lose most of the trades, but when you win, it will compensate for the losses. On the other hand, if the Win Rate is high but the R/R is low, the opposite may happen. The first strategy works best for Swing traders. It is rare, within the Intraday Trading period, the market to move enough to provide a large R/R, unless Stop Losses are too close to the Entry Point, which is dangerous, unprofitable due to high spreads, and the lot sizes need to be very small (unless you have margin), On the other hand, when Spreads are high, the Swing Trading dilutes its negative impact. The second strategy requires more expertise, but some people do well with it, and I have seen Win Rates above 90% with low R/R. In conclusion, both strategies have their pros and cons, in the end the choice is just yours.

In my opinion. these are the points to take into attention in your decision for a best Risk Management strategy:

- With long-term trades the initial market conditions may change, i.e. the underlying causes for the trend may change.
- The option for the low Win Rate/high R/R strategy will entail the possibility of long losing strikes. Just as an example, with 10 simulations of 50 trades each, 30% Win rate, R/R 4, it is possible to have a loss strike over 17, So, you must take that into consideration when establishing the amount (or percentage) to risk per trade or when you have maximum drawdown limitations..
- The option for high Win Rate/low R/R strategy provides good winning strikes and lower drawdown on average. Of course, this is the strategy chosen by the *newbies*, but is usually a losing strategy for them because they can't keep a large win rate for long. On the other hand, many experts choose it as well, when the appropriate conditions are verified (trend, volatility, spreads, etc.). But experts are more flexible in their choices, so can use the low Win Rate/high R/R strategy for different conditions.



To use the Equity Simulator, on the SkyBlue Panel we have:

- Capital: The amount of money we are starting the simulation with.
- Win Rate: This is the estimated probability of winning a trade.
- **R/R**: Reward to Risk Ratio. Measures the Potential Profit against the Potential Loss. Note: Frequently, it is called Risk to Reward Ratio with this same meaning, but it is an obvious misname because it truly means the inverse. To establish the Reward, we calculate the difference between the Take Profit and the Entry Price for Buy Orders, or between the Entry Price and the Take Profit for Sell Orders. To establish the Risk, we calculate the difference between the Entry Price and the Stop Loss for Buy Orders, or the difference between the Stop Loss and the Entry Price for Sell Orders. For simulation purposes we do not consider Spreads, Commissions and Swaps, but must not forget that they can be relevant.
- Number of Trades: The quantity of trades planned for the period of time covered by one simulation. For example, if you are planning a simulation to cover 1 month period and intend to produce 100 trades during that period, take 100 as the number of trades.
- **Risk per Trade**: Can be either a fixed amount or a percentage of the Equity after each trade is completed.
- Number of Simulations: The more simulations we perform the more reliable the results will be. Remember, trading is mostly a probability exercise.

On the Black Panel, we have:

- Expectancy per Unit of Investment: The amount we are expected to make per currency unit per trade.
- **Profit Factor**: This is the ratio of all profits from profitable trades to all losses from unprofitable trades. In other words, a ratio above 1 is required to be profitable.
- Max Absolute Drawdown %: Maximum absolute drawdown from all simulations, in percentage of the capital.
- Avg Absolute Drawdown %: The mean drawdown of all simulations' drawdowns.
- Max Relative Drawdown %: Maximum relative drawdown from all simulations, in
  percentage. Just in case it is not clear, relative drawdown is the difference between
  the peak equity at a given point in time and the lowest equity after that. Here it is

expressed in percentage of that peak equity.

- Max Win Strike: Maximum number of consecutive winners from all simulations.
- Max Loss Strike: Maximum number of consecutive losers from all simulations.

#### Notes:

- 1. The Equity Simulator is very useful but is only an educational tool. For example, some people change their risk exposure on some trades, according to the strategic analysis and expectancies of success.
- 2. When you click on a point on the chart you should see both axis coordinates of the clicked point.

### 2.7 Symbol Specifications

This is a table of important symbol contract specifications. Various other symbol specifications are not included, but if users consider them important we will have a second look.

Spread is one of the most important to watch for. Spread percentage is derived from Spread through a separate calculation (dividing the spread by the Ask Price and multiplying by 100) and is even more important than spread, because the first is absolute and the second is relative.

An additional feature of this table is that it marks in yellow color eventually detected errors. For example, I have seen one broker with Tick Value of zero in a couple of instruments which caused prices not updating on the Trade view of the Terminal panel. Another one had Tick Size 10 times the expected value. Tick Size is important for some types of calculations.

Symbol	Spread points	Spread percentage	Contract Size	Tick Size	Tick Value	Point Size	Stops Level	Digits	
EURUSD	13	0.0110	100000	0.00001	1.00000	0.00001	0	5	
GBPAUD	23	0.0122	100000	0.00001	0.73306	0.00001	0	5	
GBPCAD	24	0.0137	100000	0.00001	0.79018	0.00001	0	5	
GBPCHF	18	0.0141	100000	0.00001	1.08427	0.00001	0	5	
GBPJPY	21	0.0131	100000	0.001	0.908	0.001	0	3	
GBPNZD	26	0.0133	100000	0.00001	0.71085	0.00001	0	5	
GBPUSD	17	0.0123	100000	0.00001	1.00000	0.00001	0	5	
NZDCAD	17	0.0189	100000	0.00001	0.79018	0.00001	0	5	
NZDCHF	28	0.0427	100000	0.00001	1.08427	0.00001	0	5	
NZDJPY	18	0.0217	100000	0.001	0.908	0.001	0	3	
NZDUSD	17	0.0239	100000	0.00001	1.00000	0.00001	0	5	
USDCAD	18	0.0142	100000	0.00001	0.79020	0.00001	0	5	
USDCHF	16	0.0173	100000	0.00001	1.08427	0.00001	0	5	
USDJPY	12	0.0109	100000	0.001	0.908	0.001	0	3	
USDSEK	268	0.0312	100000	0.00001	0.11635	0.00001	0	5	
NAS100USD	17	0.0110	1	0.1	0.1	0.1	0	1	
SPXSOOUSD	4	0.0089	1	0.1	0.1	0.1	0	1	
U530U5D	20	0.0057	1	0.1	0.1	0.1	0	1	
WTICOUSD	30	0.0423	100	0.001	0.100	0.001	0	3	1
XAGUSD	1500	0.0635	5000	0.00001	0.05000	0.00001	0	5	
XAUAUD	809	0.0332	300	0.001	0.073	0.001	0	3	
XAUUSD	276	0.0154	100	0.001	0.100	0.001	0	3	
BTCHER	1000	0.7450		P. 4			2		

Monitor Risk Manager Dashboard Information and Utilities

### 2.8 TradingHours

The Forex Market is open 24 hours a day, 5 days a week. However, even if you only trade Forex Pair, the major Stock Exchange sessions have influence on the volatility and liquidity of currency pairs. Of course, if you trade stocks or indices they have even more influence.



#### **Tokyo Standard Time**



#### Notes:

- 1. Holidays are not computed.
- Daylight Saving Time is computed. It appears to work well under both Windows 10 and Windows 7 duly updated (this is important, some places change their options on DST from time to time).
- 3. In most Exchanges, some trading do occur outside the regular trading hours, it can be either before or after the regular sessions. We only report the NYSE After Market period because it is probably the most significant.

#### 3 Strategy

Retail Traders use different strategies. Although statistics confirm that more than 90% of Retail Traders fail within a short period of time, this does not mean that the spirit of the strategy was wrong. It may mean that its implementation was not correct. So, I am not going to advocate any particular strategy, there are cases of success in every strategy.

I would like to stress only the following points:

- Risk Management is very important. I have previously elaborated on this subject. You should endeavor to understand it well, don't gamble. If you gamble, you may belong to a lucky minority and be gifted with a good winning strike earning good money. But if you continue, it is absolutely granted, you will lose all the gains and more.
- Most Chart Indicators on the market are misleading. A few are useful, though. You should have a good Volatility Indicator and here I would suggest the ATR indicator because it is easy to use (but there are other good ones). You should have, as well, a good Impulse Indicator, there are many to choose from and I would not recommend any in particular.
- Obviously, I strongly recommend the use of our Currency Strength Meters and the Correlations Chart as a base for work.
- For the Period Currency Strength, make a top down analysis. Start by looking at the weekly chart and annotate the relative positions of the currencies and their trends. Pay particular attention to the USD because it has utmost influence on commodity prices and the commodity prices in turn have influence on other currencies and even in stocks/indices. Then look at the daily Currency Strength chart, it may confirm the weekly chart or a deviation from it. A lengthy deviation must be studied carefully to assert possible underlying fundamental changes. Then move on to the 4-Hour Currency Strength chart. You can take the 4-hour chart as the base for intra-day work or move further down to explore potential differences during the day. Lower time frames are more risky but also potentially more rewarding.
- Study the Correlations Chart. There are very good correlations between the currency pairs themselves and between some currency pairs and various commodities. Some good correlations last long, others are significant only on some time frames. Correlations can also be used for Hedging, i.e., to reduce the risk.
- Look at the MT4/Mt5 Charts. Zones of Supply and Demand are important. The storyline behind them is controversial, however something might be expected in such zones, for example a consolidation for a possible break out. The size and form of the candles and where they happens is important. Conclusions taken from these observation are far from being always correct, but we are in a probabilistic game that is a mix of luck and skill and every little bit helps to turn the odds in our favor.
- Have a look at good sources of market information. Be aware that most of these sources are biased and manipulated. Capability to collect useful information and read behind the headlines takes time and may be the first reason veteran Traders say, we need years of experience to become consistent. Probably, not as long as that, but it tends to improve along the time.
- At all times, use your brain, it is the best indicator, but don't follow your guts. The brain will allow crossing all the information to produce a rational decision.

This is my opinion, if you think otherwise and are profitable for a long time why change?

### 4 FAQ

Q: Do you have plans to develop an Expert Adviser? A: Yes, we have. It is not scheduled yet.

Q: Do you have plans to add other tools to the Dashboard?A: We will continue working on making information as clear and accessible as possible, this will translate either into new tools or modification of the existing ones.

Q: How responsive is AW Trader Toolkit ?

A: When History Data is Available, AW Trader Toolkit responds in milliseconds, much faster than any MT4/MT5 indicators.

Q: How can I see properly the Currency Strength Chart during the weekend? A: If you know the number of minutes difference between your local time and the broker's server time, you can enter a DWORD value named Server Gap in the Registry at: HKEY\_CURRENT\_USER\SOFTWARE\Atelier Web\AWTT\MT4 (or MT5 for the MT5 version). If your local time is less than the server local time, the value must be a negative value. To calculate a negative value acceptable by the Registry, you can use the Windows Calculator (Programmer variation). For example -120 minutes is FFFFF88 in hexadecimal, this is the value you will enter into the Registry. If you want to skip this procedure, AW Trader Toolkit will always make an estimate, may not be correct, but will be good enough for most purposes.

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