



## V.1.0.2 User Manual

Hybrid Indicator/EA for use with MetaTrader 4 software

© [www.fxtools.info](http://www.fxtools.info), 2012.

# Contents

- 1. Introduction**
- 2. Installation**
- 3. Setup**
- 4. Menu Buttons**
- 5. Display Panel**
- 6. Chart Mode**
- 7. Market Session Mode**
- 8. Trade Panel**
- 9. Auto Stops**
- 10. Reverse Signal**
- 11. Money Management**
- 12. Semi-Auto Trading with FX Reactor**
- 13. Fibonacci Tool**
- 14. FX Reactor settings**
- 15. End User License Agreement**

# Introduction

FX Reactor is a hybrid indicator/expert advisor for semi-automated trading. Frustrated with the opaqueness of FX Trading (Metatrader 4 style), we have spent countless hours developing what we believe to be an extremely handy and time-saving tool for basket trading, or simply finding the best trending pairs to trade at a glance.

Basket trading a bunch of correlated pairs often produces better results than relying on one single pair. For instance if we know that the USD is weakening, and GBP, EUR and AUD are strengthening, it makes sense to not only Sell USDJPY, but also Buy EURUSD, GBPUSD and AUDUSD to diversify your risk. The combined result of matched pairs (strong and weak) generally provide more stability of movement and assured success, we need only wait for their cumulative profit as the trends advance.

With FX Reactor you have not only a powerful currency strength meter at your disposal that ranks 8 major currencies as a percentage, but a one-click trade panel that can trade the top 3 trending pairs semi-automatically, a world market sessions monitor, chart analyser, trade volume monitor, auto fibonacci tool and more.

With the currency and stock markets changing and evolving at a rapid rate the prospective trader needs better tools at his or her disposal for technical analysis and faster trade execution to compete with the best of them. Using a unique click-on-screen interface, efficient trading is made a lot easier for newcomers and professionals alike.

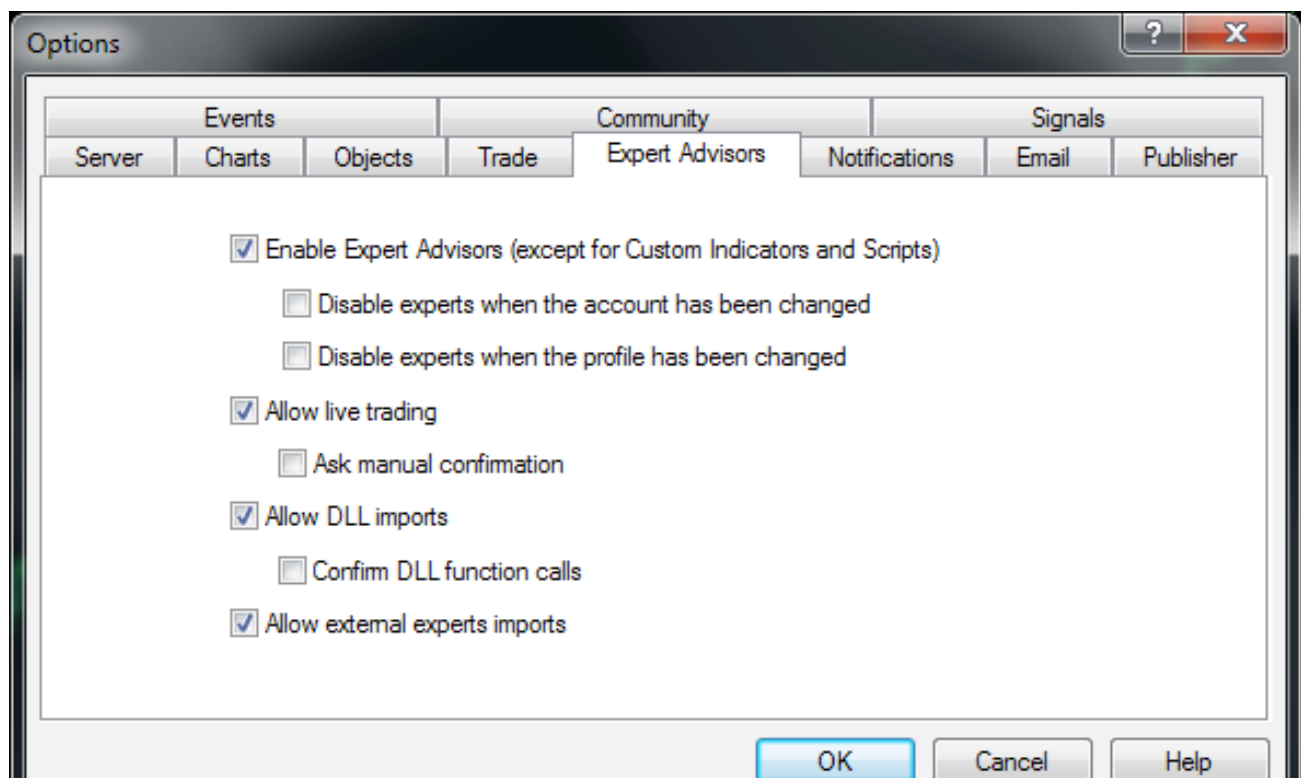
We hope that FX Reactor helps to give you the edge you've been looking for in the financial markets.

Best wishes,

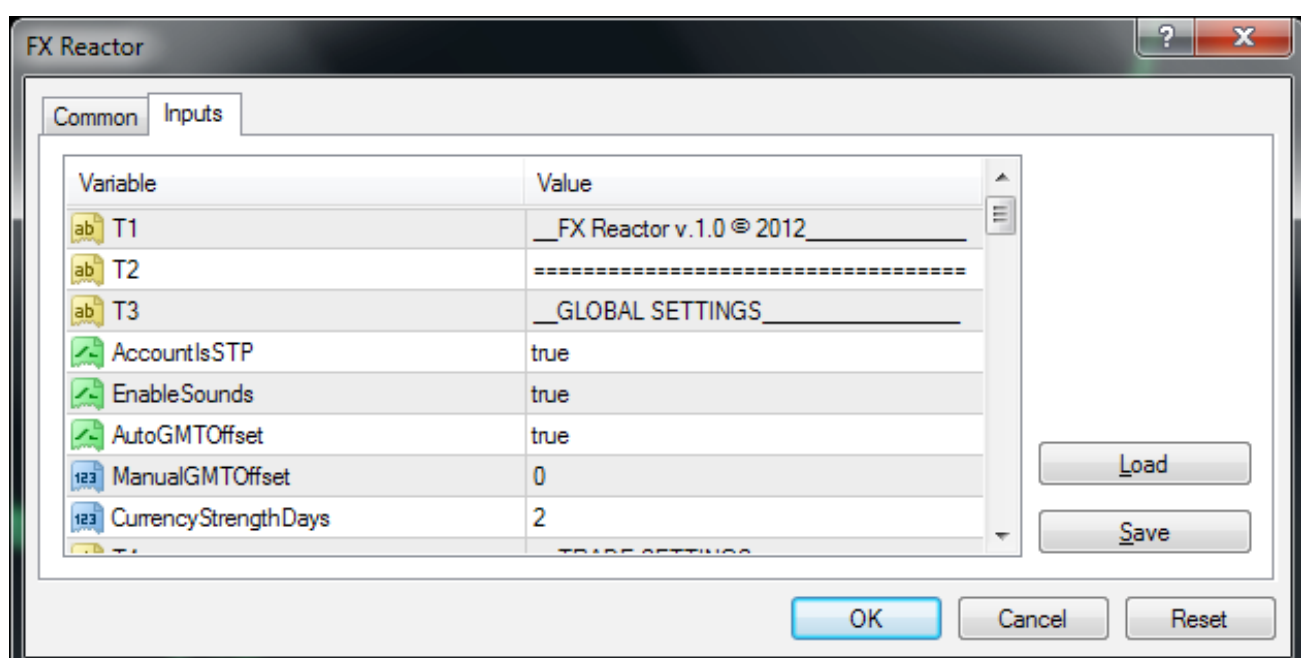
FX Tools team.

# Installation

First, run the setup installer, choose the Metatrader 4 folder you want to install FX Reactor to, click next and allow the installation to finish. Now start MetaTrader 4. Before loading the EA onto a chart make sure the MetaTrader options are set correctly. Go to Tools --> Options and click the Expert Advisors tab. Make sure the settings are the same as below.

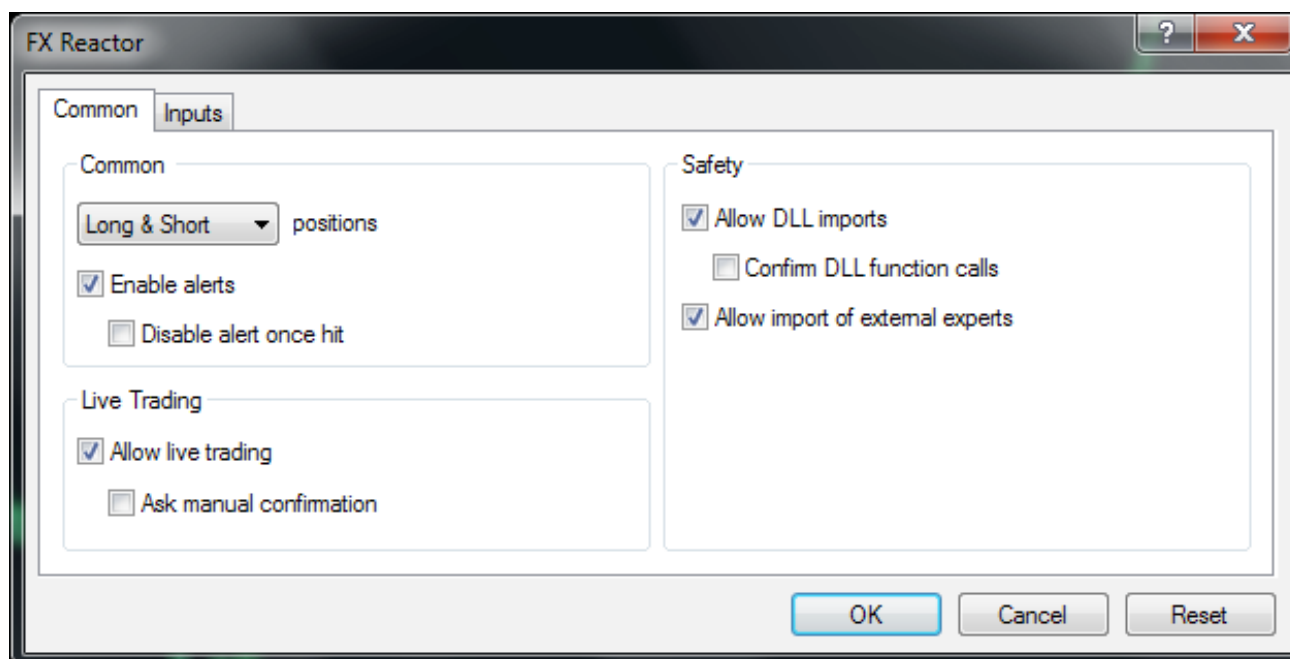


Now attach FX Reactor to a chart. In the Navigator window on the left in the Experts menu, double-click FX Reactor or drag it across onto the chart. The Inputs panel will appear showing the settings, you can adjust the settings yourself or stay with the defaults.





Now click the Common tab and make sure the boxes are checked like the picture below. Then click OK.



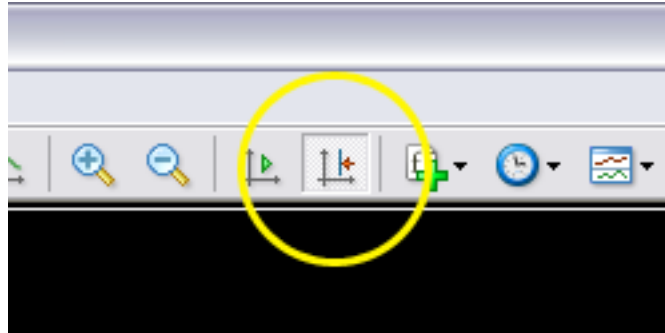
FX Reactor is now installed properly, next follows the steps to get it setup on a chart.

**IMPORTANT:** If you have problems during installation, right-click the installer and then 'Run As Administrator' and try the installation again. If after doing this you are still having problems, try disabling 'User Account Control' temporarily while you install FX Reactor with Administrator privileges as before.

In case the installer simply will not work on your machine, install the files manually from the Backup Files folder to your MT4 program folder.

# Setup

Click the ChartShift button to make room for FX Reactor on the right side of the chart. The little grey triangle at the top of the chart can be moved left to bring back the price bars even further.



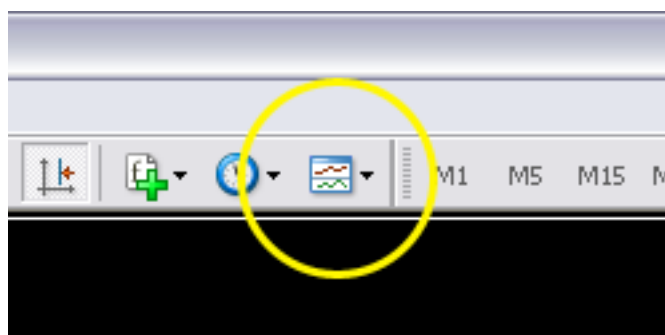
ChartShift button

To move the indicator elsewhere on the chart just double-click on it and drag it, then double-click again to deselect it. When selected a highlight box will appear around the edges like below.



Click and Drag

Make sure FX Reactor sits on the foreground of the chart by pressing F8 to access Chart Properties, under the Common tab un-check the 'Chart on foreground' box. And if you don't really use the grid, its better just to get rid of it by un-checking the 'Show Grid' box.



Save a Template

Once you have the display setup how you like with any other indicators on the chart, you can save it as a Template for easy loading later.

# Menu Buttons

When you first load up FX Reactor, you will see the menu buttons and the display panel as below. If you want to use it as an indicator only then make sure that the Expert Advisors button is off, so as not to make any unwanted trades by clicking buttons accidentally.



The display panel sits in the bottom right of the chart by default, but if it is not where you want it to be, move it around the chart by double-clicking and dragging it. In the upper left is a visual menu of 8 buttons which activate different functions or modes.

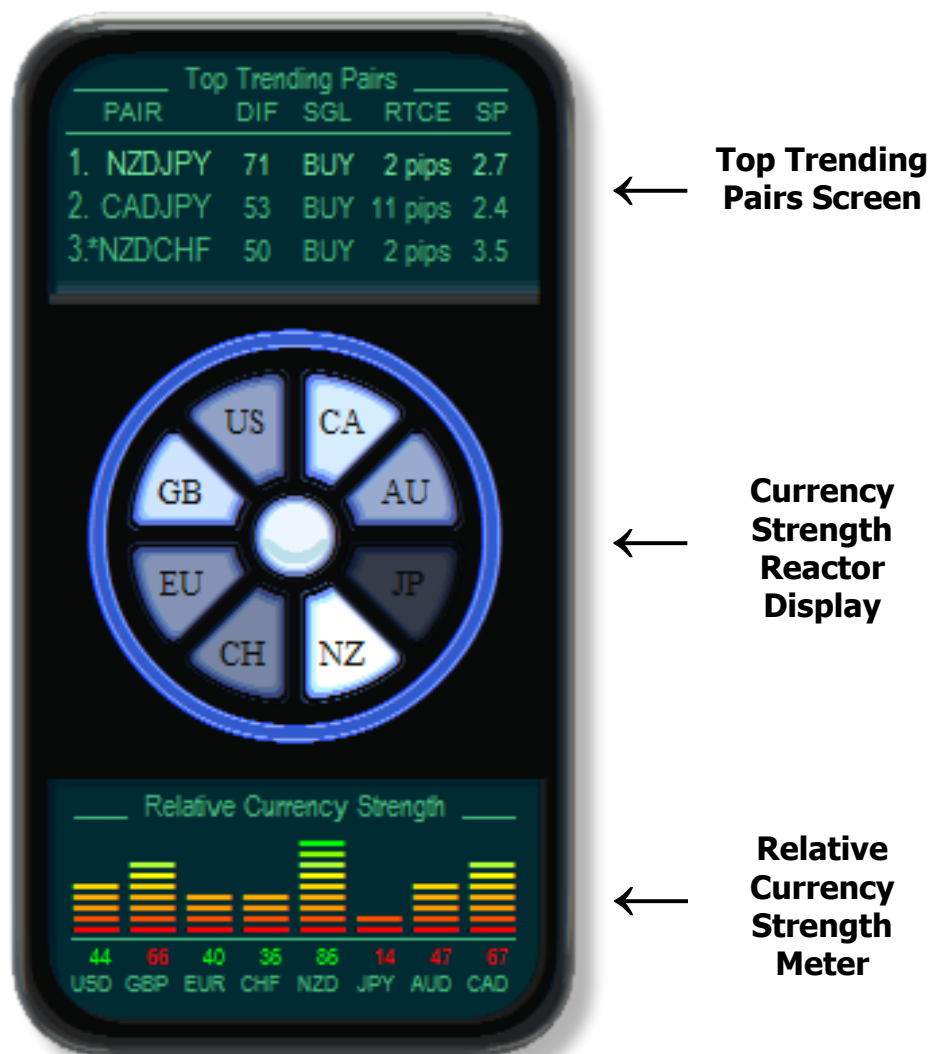


- **TRADE** mode opens the one-click trading panel. Here orders can be defined and placed easily with adjustable Lot size, TakeProfit, StopLoss, TrailStop and BreakEven values. All open trades can also be closed with one click from this panel.
- **STOPS** will enable AutoStops mode which adds stop levels automatically in one of three ways; Range Stops, Session Range Stops and Fibonacci Stops. By default, **RangeStops** is enabled, so for trades on the current chart a StopLoss is placed at a recent high/low and the TakeProfit is then set as a customizable ratio to the StopLoss value.
- **REVERSE** will reverse the trade signal for counter-trend trading.
- **CHART** enables Chart mode, which shows the pair information for the current chart in the top screen, and also brings up the Trade Volume Balance screen below.
- **SESSION** enables Session mode, showing the market session screens.
- **FIBO** shows the auto fibonacci retracement tool on the chart.
- **PANEL** shows or hides the main display panel.
- **OPTIONS** breaks the program loop so you can access the settings by pressing F7 or clicking on the smiley face in the upper right corner.

To enable a mode just click the button once, to disable it click it once again.

# Display Panel

The default display panel is shown below. The information presented is an indication of the global strength of 8 major currencies, useful to quickly find trending pairs and make trading decisions based on each currency's performance.



## Relative Currency Strength Meter

FX Reactor uses 28 currency pairs to determine the global strength of each major currency (8 pairs for each one) and normalizes them as a percentage of 100 so the strong pairs can easily be matched with weak ones. The percentages of each column will be a green colour if the currency is strengthening or red if it is weakening. It is best to match the strongest rising pairs with the weakest falling pairs, as in the above example it can be seen the New Zealand Dollar is strongest and Japanese Yen the weakest, therefore it shows a great opportunity to Buy the NZDJPY pair. The accuracy of the meter is lessened if your broker has less than the full 28 pairs available for trading. This accuracy is shown in the upper left corner of the chart. Although it will still work very well if there are some missing pairs, we recommend using a broker that has them all, such as Pepperstone. The full list of pairs used by FX Reactor is EURUSD, GBPUSD, AUDUSD, USDJPY, USDCHF, USDCAD, EURJPY, EURGBP, EURCHF, EURAUD, GBPJPY, GBPCHF, GBPAUD, GBPCAD, GBP NZD, EURCAD, EURNZD, NZDUSD, NZDJPY, AUDJPY, CHFJPY, CADJPY, AUDNZD, AUDCHF, AUDCAD, NZDCAD, NZDCHF, CADCHF.

## Currency Strength Reactor Display

The central 'core' display of FX Reactor visually represents the strength of the 8 major currencies, with strongest being brightest and weakest being darkest. The overall colour of the display is indicative of the sentiment of the current chart that FX Reactor is placed on. Blue indicates a Bullish trend, and Red a Bearish trend of the current chart pair. This sentiment is shown in CHART mode (see next section) and can be adjusted in the settings. By default the sentiment is set to the Daily chart (1440) with a period of 1, but this can be changed to any timeframe or period in the settings (under 'Sentiment Meter').

## Top Trending Pairs Screen

This screen shows the top three trending currency pairs at any given time, based on the information gathered from the strength meter. Any of the pairs displayed can be traded semi-automatically from the One-Click Trade Panel. Several values are also shown for each pair as follows.

**DIF** is the percentage Difference between the strength of the two currencies that make up the pair. While this value is increasing the trend is continuing, when it is decreasing the trend is contracting.

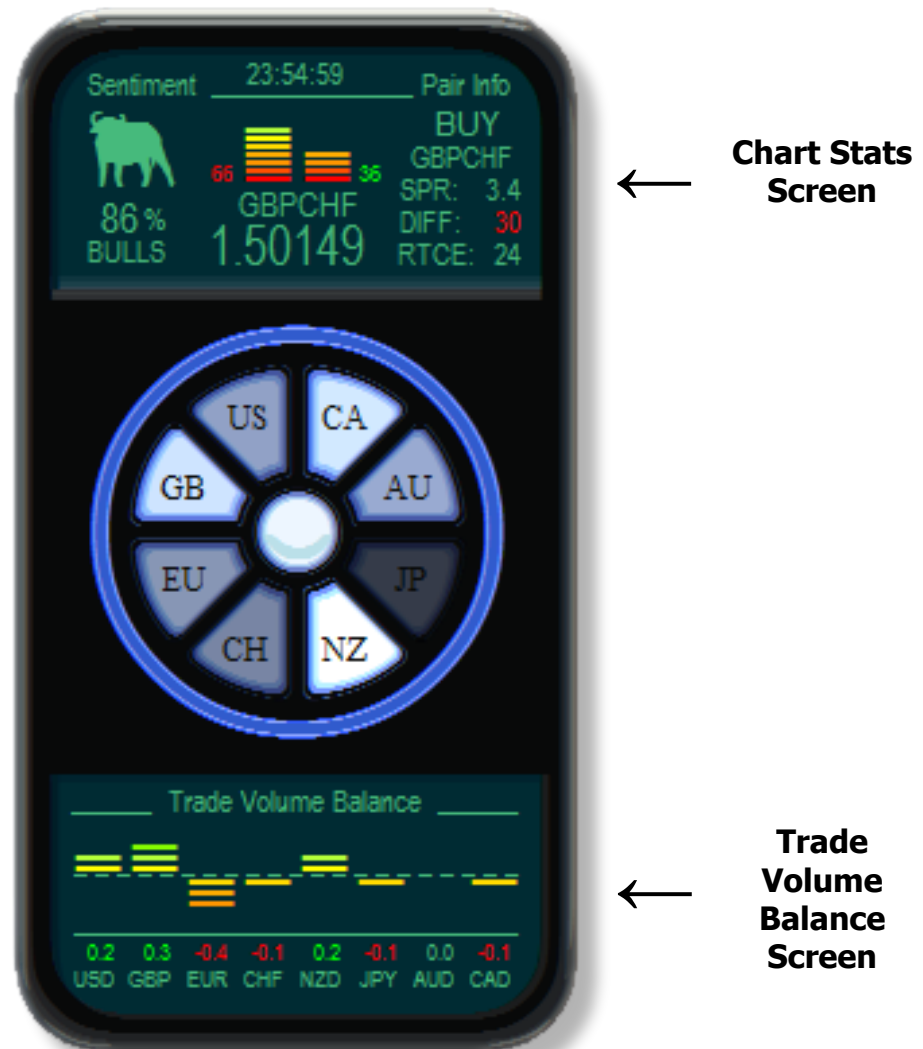
**SGL** is the Signal or suggested trade direction of the pair based on the current trend. Any of the 3 suggested trades can be placed automatically using the Trade Panel, by clicking the **Top 1** or **Top 3** buttons.

**RTCE** is the Retracement distance in pips from the daily high or low (whichever is nearest to the current price). When the pair is actively trending this value will be low but as the trend contracts or reverses this number increases. It can be useful to gain an advantage on the entry price.

**SP** is the Spread of each pair in pips.

# Chart Mode

By clicking the **CHART** button two additional screens appear. The top one shows pair information relative to the current chart that FX Reactor is on. The bottom screen shows the currency weighting of your combined active trades.



## Chart Stats Screen

The two columns in the middle indicate the relative strength of both currencies in the chart pair, with name and current price below. The strength value sits next to the column, if the currency strength is rising the value will be green, if falling it will be red. When you are trading with the trend it is desirable for the dominant currency to be rising (green) and the weaker one to be falling (red), but if counter-trend trading the reverse is true.

On the left the Sentiment % of buyers and sellers is shown. This sentiment indicator is the same as the included ASO (Average Sentiment Oscillator) indicator that was installed to your 'Custom Indicators' folder. By default this is set to the Daily chart with a period of 1, which is the current day only. Therefore in the above example the current daily candle of GBPCHF is 86% bullish. If the Bulls (buyers) are dominating (greater than 50%) the Bulls percentage will be shown, and the central currency display will be blue, if the Bears dominate then the Bears percentage will appear and the central display will be red. It is possible to modify the Sentiment indicator to whatever period and timeframe you like in the settings,

for instance you may want to match it with the ASO indicator settings you are using (default period is 5) on the current chart, so you would change **SentimentPeriod** to 5 and **SentimentTimeframe** to 0 (for current chart).

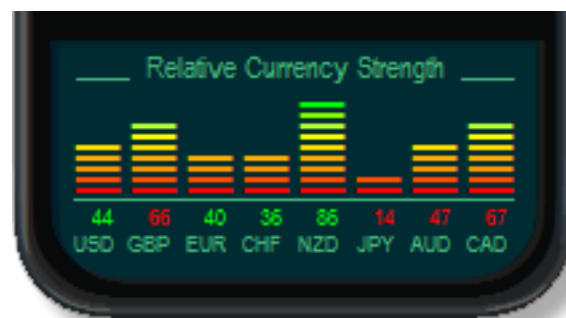
On the right of the screen more information is shown for the current chart pair, with Signal, Spread, Difference, and Retracement values, as described earlier. If a pair that you would like to trade is not on the Top Trending Pairs screen, simply change to the corresponding chart and click the **CHART** button to see these details. A quick way to change charts is simply to drag the selected pair from the Market Watch window directly onto the chart.

## Trade Volume Balance Screen

This is essentially an exposure indicator, useful if you have multiple open positions and you want to know the currency weighting of your combined trades. Basket Trading involves opening several or many positions with different currency pairs to diversify the risk and increase chances of success. The basket of combined trades are held for a time until they are profitable overall. FX Reactor shows you the strongest trending pairs so all you have to do is keep trading the suggested ones to create a basket of trending pairs, but you may not want to have too many of one currency dominating the basket. The balance meter will show you the total trade volume weighting of each currency in lots. For the purpose of the meter the base currency of each pair (1st symbol) will be weighted with the trade volume in one direction as will the quote currency (2nd symbol) in the other direction, so for each pair one column adds the volume and another column subtracts the volume. This is because with currency pairs when you buy one currency (the base) you are simultaneously selling another (the quote), or vice versa.

## Example

Using the strength values below we open 10 trades following the trend of each currency, all at 0.1 lot each.



The trades are as follows:

Sell - EURUSD, EURGBP, EURNZD, EURCAD, AUDNZD

Buy - USDJPY, NZDJPY, CADJPY, AUDJPY, EURJPY

For the EURUSD short trade, the EUR (base) will subtract 0.1 from the EUR column, and the USD (quote) will add 0.1 to the USD column. The next 3 short trades EURGBP, EURNZD, EURCAD subtract another 0.3 lots from the EUR column bringing it to -0.4, meaning we have sold 0.4 lots of EUR in total. However another EUR pair is traded, EURJPY, but this one is bought, which adds 0.1 to the score of -0.4, bringing the overall score to -0.3 lots in the EUR column.

The other pairs are calculated to reveal the following scores...

USD	GBP	EUR	CHF	NZD	JPY	AUD	CAD
0.2	0.1	-0.3	0	0.3	-0.5	0	0.2

Now we can see the strongest weighted currency in the basket is actually JPY, of which we are selling 0.5 lots. This means we are relying heavily on the fact that JPY is weak and will continue to weaken, therefore our risk isn't as diversified as it could be while our basket is weighted with JPY. If we wanted to remedy this, we could close a couple of the JPY trades, ie. USDJPY and AUDJPY to balance the overall scores a bit more, like this...

USD	GBP	EUR	CHF	NZD	JPY	AUD	CAD
0.1	0.1	-0.3	0	0.3	-0.3	-0.1	0.2

To balance the basket even more while retaining preference to the trending pairs we could buy GBPAUD, USDCHF and CADCHF so it now looks like...

USD	GBP	EUR	CHF	NZD	JPY	AUD	CAD
0.2	0.2	-0.3	-0.2	0.3	-0.3	-0.2	0.3

If we were to balance the basket perfectly, all the scores would be 0, though this means we have to hedge the trending currencies. For instance, if we buy NZDJPY and want to hedge it we would have to sell NZD again, either by selling a pair where NZD is the base currency (1st) or buying a pair where NZD is the quote currency (2nd). This brings the NZD column to 0, but adds weight to the other currency columns. When hedging pairs like this the cumulative profit will be less and more gradual but possibly safer. However it is still possible to trade profitably this way and is worth trying, at least for experiment's sake.

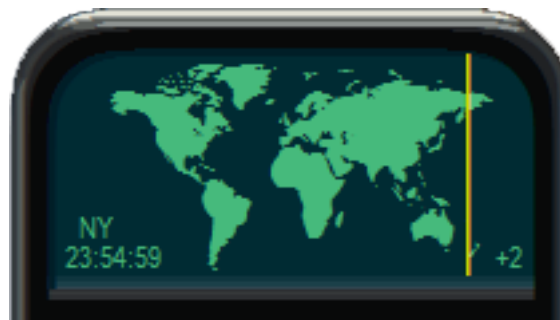


# Market Session Mode

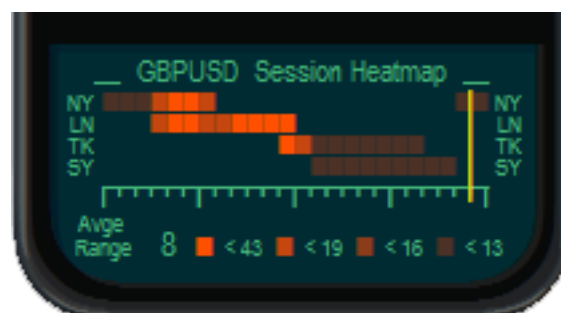
The **SESSN** button brings up the market session information on the indicator panel. It's important to know the most active hours of the financial market you're trading, with FX Reactor you only need to click a button to find out.



The top screen shows the world map with the current chart/server time and market session displayed on the left. On the right the GMT offset of your broker is shown, if **AutoGMT-Offset** is disabled, this number will be the **ManualGMTOffset** you have set. The yellow marker represents the current hour moving from right to left, or east to west like the sun. The picture below shows that the current time is the end of the New York session, meaning only the New York financial centres are open for trading, London and Tokyo are closed and Sydney is about to open.



At the bottom of the panel the Session Heatmap is displayed, showing the average hourly range of the past week's trading (last 5 business days). The four main sessions from top to bottom are New York, London, Tokyo and Sydney. The color code shows the relative strength of each hour as a 'hotter' or 'cooler' color, with the key on the bottom showing the maximum range of the color-coded hour. In the example below the hottest color represents an average hourly pip range of between 19 - 43, the second hottest color shows an average range of 16 - 19, the third hottest color 13 - 16, and the coolest color 0 - 13. The average range of the current hour is shown on the far left as 8, meaning that this hour (23:00) has had an average High to Low range of 8 pips over the last 5 trading days (not including the current day). So if today is Thursday, the hour is averaged back from Wednesday (yesterday) to the previous Thursday. Therefore we can expect the range of this hour to be roughly around 8 pips, which can help us calculate TP and SL levels or projected price movement.



# Trade Panel

With FX Reactor you can bypass the need to use MetaTrader's market order window and trade using only the mouse, so less wasting time typing in your Lot size, StopLoss or Take-Profit levels. To open the trading panel, click the **TRADE** button on the top left, and it will drop down below the menu as pictured.



The top of the panel shows the currency pair or instrument of the current chart and the spread on the right. The **BUY** and **SELL** buttons below show the Bid and Ask prices respectively. These trade buttons will place orders for the current chart pair only.

Adjacent to the two trade buttons is the Lot size adjuster, by clicking the right or left arrows you can increase or decrease the lots of your order. By default it will increase/decrease the lots in units of 0.01, but for different increments (ie. 0.1 lots) go to the settings (click the **OPTNS** button and press F7) and change the **AdjustLotsIncrement** value in the Trade Settings section.

The default maximum of active trades allowed is 10, to increase the number of trades go to the Trade Settings and change the **MaxOpenTrades** value.

The four boxes below the trade buttons are the StopLoss, TakeProfit, BreakEven and Trail-Stop values to apply to your orders. You will at first see the default values from the settings, but if you change these settings then your new values will become the defaults when the trade panel is opened. Use the arrows in each box to increase/decrease the pip values, you can do this before or after placing a trade but keep in mind that FX Reactor won't automatically update the stop level after the trade is placed unless you click on the SL or TP titles, next to the values. At any point you can increase the TrailStop or BreakEven values and they will manage your trades automatically.

Below the order settings buttons the floating profit is displayed. This is calculated as (AccountEquity - AccountBalance).

The **TOP 1** and **TOP 3** buttons place orders for the currency pairs shown on the Top Trend-

ing Pairs screen. Click them once and wait for the orders to be executed.

At the bottom of the panel is the Close All Trades button and the Reset Values button. The **CLOSE ALL** button will only close orders identified by the magic number defined in the settings, so by default it won't close trades you have placed manually using the market order window of MetaTrader, but if you do want to manage manual trades using FX Reactor change the **MagicNumber** to 0 in the 'Trade Settings' section. The **RESET** button will reset the values to default settings. If you're changing charts or are finished with the trade panel click the **TRADE** button again to hide it, so that no trades are placed accidentally.

## Auto Stops

The **STOPS** button enables Auto Stops mode to set stop levels automatically, based on current market dynamics. It can be activated by clicking the **STOPS** button on the chart.



There are three types of AutoStops functions to choose from:

1. **Range Stoploss** - By default AutoStops mode places a stoploss at the recent lowest low or highest high within the period defined by **RangeStopsPeriod** (ie. the last 10 bars by default). The stoploss is placed at the high (when selling) or low (when buying) plus (or minus) **AddPipsToStops** number of pips.
2. **Session Range Stoploss** - If **SessionRangeStops** is enabled, the average hourly pip range of the past week's trading (last 5 days) is used to determine the stoploss. This value is taken from the current hour shown in Session mode (click **SESSN** button) on the bottom left of the Session range heatmap, next to 'Avge Range'. **SessionRangeMultiplier** can be used to increase or decrease this pip value, multiplying it by the number specified.
3. **Fibonacci Stoploss** - If **FibonacciStops** is enabled, the auto Fibonacci retracement tool will appear on the chart. The TP and SL will be set at the **FibTPLevel** and **FibSL-Level** retracement levels, which can be of any value, not just the ones shown. To adjust the bar period of the tool, use **FibPeriod**.

With the first two functions the TP is calculated as a ratio of the distance between the order entry price and the SL, so if **RiskRewardRatio** is 0.5 as it is by default, the TP will be half the value of the SL (ie. if the SL is found to be 32 pips then the TP will be set at 16 pips).

If you have set **TakeProfit** or **StopLoss** values in the settings they will override the automatic stops, so set TP and SL to 0 if you want to use the automatic stop levels. Remember that the **RangeStops** and **FibonacciStops** functions will give different levels on different timeframes, only **SessionRangeStops** is the same on all timeframes.

To add automatic stop levels to your existing trades, enable one of the three functions in the settings, then click the **STOPS** button and change to the chart for each pair you have actively traded. You can simply drag the pair from the Market Watch window directly onto the chart.

# Reverse Signal

The **REVERSE** button allows you to reverse the signal if you want to trade counter to the trend (Buy low, Sell high strategy). If you are relying on the opposite signal permanently, you can enable **CounterTrendSignals** in the settings instead.



Generally it is much safer to follow the trend than to trade against it, although many traders are constantly on the lookout for reversal signals to trade, which is dangerous when the trend is strong or during high volatility. Although trend following is a safer bet, there are often many retracements within a trend and it is common to experience some drawdown while waiting for the trend to advance. Also if the market is ranging, it is better to take reversal signals, or simply stay out of the market, than follow a trend that isn't there.

This is why it's advisable to look at the charts of your pairs before deciding whether to trade with, or against the trend. Extreme currency strength values (ie. greater than 90% or less than 10%) can indicate that a reversal may be imminent, so it helps to look at the price action on the charts to determine if your prices are near any support/resistance levels. Use the **FIBO** button to bring up the auto fibonacci tool on the chart to help with this or use the included indicator '**%Fib\_Res\_Sup**' in your Custom Indicators folder to check daily S/R levels for your pairs.

Whichever way you trade, FX Reactor makes it easy to trade with, or counter the trend.

# Money Management

In the 'Money Management' section of the settings you'll find the **RiskManagement** switch, which allows you to allocate a specific percentage of your balance per trade. If you enable it, set the **RiskPercent** value to the percentage you want to risk on each trade. A StopLoss of some sort must be used with **RiskManagement** to set TP and SL levels or it will use the default fixed **LotSize**, so you must either set a **StopLoss** value or use one of the **AutoStops** modes. If you are using the One-Click Trade panel to execute your manual trades, **RiskManagement** will automatically calculate your Lot size based on your StopLoss and **RiskPercent** value. Whether you have SL or TP levels on your active trades, FX Reactor will close your trades automatically if your Account Equity is in profit or loss by the **RiskPercent** value.



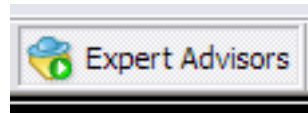
The picture above shows the One-Click trade panel with **RiskManagement** enabled at 2% risk on a 10K account. The SL is set at 30 pips therefore the Lot size to risk 2% of \$10,000 is 0.67. The TP is set at 30 pips as well giving a Risk/Reward ratio of 1:1, meaning the next trade executed from the trade panel will either win or lose \$200.

If you want to take profits or losses based on your account currency (ie, dollars, euros, yen, etc.) use the **CurrencyTP** and **CurrencySL** values. If your account is in US dollars, setting a **CurrencyTP** value of 100 will close all trades when your account equity is \$100 greater than your account balance. This is particularly useful when basket trading, ie. diversifying trades across several currency pairs or instruments when the combined profit of all trades is sought. This is where a Currency TP or SL comes in handy.

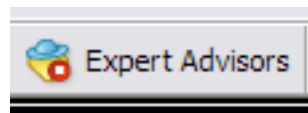
Lastly, if you don't want to set TP or SL but ensure that your trades won't eat your entire capital, you can set an equity value StopLoss to protect your account with **GlobalEquitySL**. If your account equity falls below the specified amount all trades will close. So if you have a 10K account and are willing to risk no more than 20% of it, you would set **GlobalEquitySL** to 8000.

# Semi-Auto Trading with FX Reactor

The difference between fully automated trading and semi-auto trading is that one involves no discretion on part of the trader who just lets an EA run by itself 'set and forget' style, and the latter requires some discretion to determine if a generated trade signal should be taken by 'pulling the trigger'. FX Reactor only allows semi-automated trading. To execute trades using the Trade panel, the Expert Advisors button must be ON, as below.



A smiley face should be visible in the top left corner of the chart showing that the expert is enabled and ready to trade. The Trade panel will not work if this button is disabled, so if you intend to use FX Reactor as an indicator only, switch this button OFF so that trades are not made accidentally, as shown below.



Firstly, check the Top Trending Pairs screen to see the top three trending pairs available.

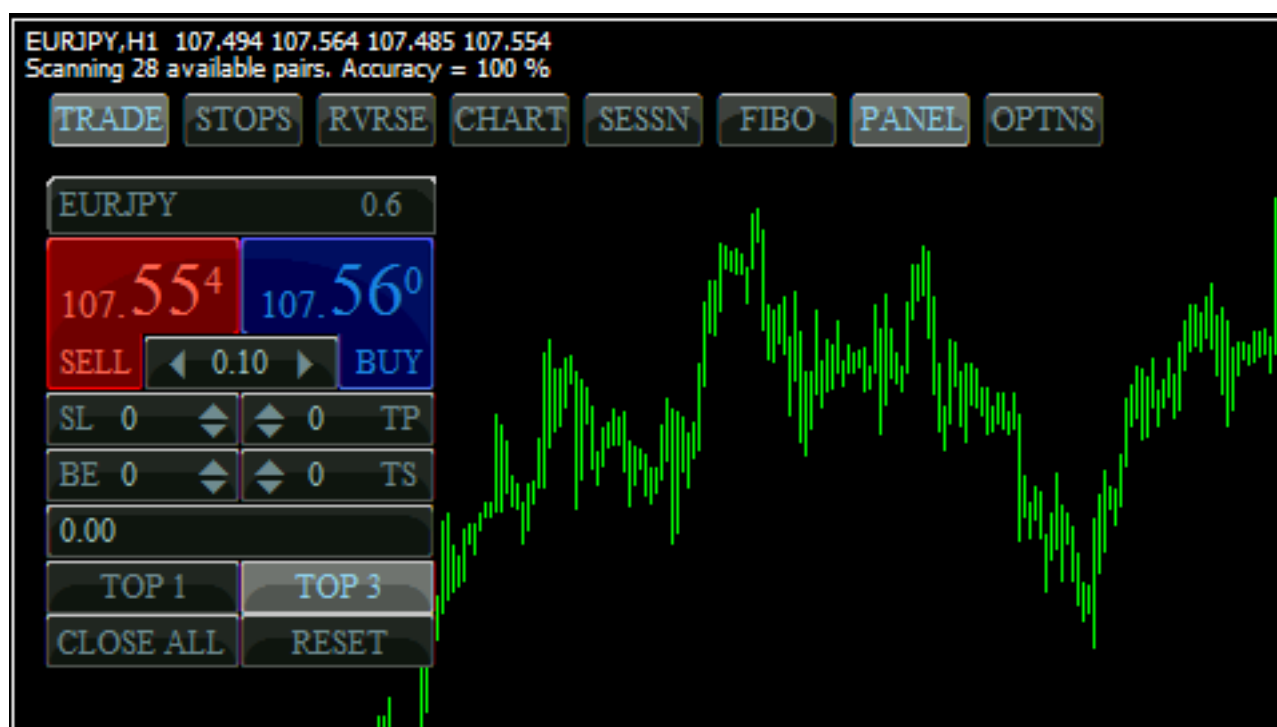


PAIR	DIF	SGL	RTCE	SP
1. EURJPY	63	BUY	12 pips	0.9
2. EURNZD	61	BUY	1 pips	1.7
3. GBPJPY	60	BUY	5 pips	1.0

These pairs have the highest **difference** between base and quote currency strengths, shown by the % values in the **DIF** column. The trade signal for for each pair is shown in the **SGL** column. If you are following the trend then use these signals, otherwise click the **RVRSE** button on the chart to reverse the signals and trade counter the trend (ie. Buy low, Sell high). The **RTCE** column shows how much the current price of the pair has retraced from it's daily high or low (whichever is nearest). This retracement value shows whether the trend is advancing or retracing. The **SP** column is the spread in pips for each pair.

You might want to check the charts of each pair first, or simply place the recommended trades immediately. Note, by default FX Reactor gives trend following signals, counter-trend signals can be used by clicking the **RVRSE** button or enabling **CounterTrendSignals** in the settings.

Click the **TRADE** button on the chart to bring up the Trade panel, as below.



To trade the three strongest trending pairs semi-automatically, click the **Top 3** button once, and wait for all the trades to be executed. To trade only the top trending pair displayed, click the **Top 1** button. It is important to have a good internet connection for reliable execution speed and to prevent timeouts or requotes.



After execution, you will see an asterisk (\*) next to the pairs you have bought or sold. This not only means you have the pairs in your basket, but they will not be traded again automatically by FX Reactor unless **NoDoubleTrades** is disabled in the settings. So you can keep clicking the **Top 3** button to add new pairs that appear on the screen to your basket without trading the pairs you already have again.

Basket trading commonly involves placing 10 or more different trades and waiting for a cumulative gain as the trending currencies advance.



# Fibonacci Tool

FX Reactor has an auto fibonacci retracement tool that appears on the chart if the **FIBO** button is pressed or **FibonacciStops** is enabled in the settings. It will appear on the chart similar to the picture below. Click the **PANEL** button to hide the main panel if necessary.



The retracement tool looks for the highest high and lowest low within the last number of bars defined by **FibPeriod** in the 'Indicator Values' section. The retracement will always begin from 0% at the nearest high/low and is drawn back to 100% at the previous high/low within the period specified. Each level represents a retracement percentage of the most recent high/low range, so we can see in the above example that the fibo tool stretches from 1.3364 down to about 1.3249 spanning a range of about 115 pips. It has just bounced off the 50% level, known as the pivot, which is an important level and in this case would have been a good place to set a Buy Limit order after price started falling from the high at 1.3364.

If you want to set TP and SL at fib levels, enable **FibonacciStops** in the 'Auto Stops' section and set the TP and SL levels using **FibTPLevel** and **FibSLLevel**. In the above example, if we had placed a Buy order at the 50% fib level we could then set **FibTPLevel** at 23.6 and **FibSLLevel** at 76.4 for a trade with an equal Risk/Reward ratio. Just click the **STOPS** button before placing a trade using the Trade panel, or after, to add the stops to existing trades on the current chart.

The level at which price retraces to is a good indicator of how strong a trend is and what state the market is in. Often in the initial stages of a big move price may only retrace to 23.6% after it has met a support/resistance level and then carry on in the direction of the trend. When the trend begins to lose momentum it will retrace further and further back from the recent high/low.



In an ideal scenario of an upward trend, the first pullback might be to 23.6%, the second might be 38.2%, the third 50%, the fourth 61.8%, etc. until the recent low at 100% is tested and broken and the trend changes direction. Usually the best retracement levels in a sideways market will be 76.4% and 100% as there is general confusion around which way price is heading, also known as consolidation. So the fibonacci retracement tool is a handy gauge to read current market conditions and the question, "Is the market moving up, down or sideways?" should always be asked before placing trades. This will give an idea of which retracement levels to use. A bounce off 61.8% shows that the trend is still active but may be weakening, as the 50% level is usually the lowest level price will pullback to in a strong trend.

To change the color of the fib retracement tool, go to the 'Display' settings and change **FibColor**.

# FX Reactor Settings

To access the input settings click the **OPTIONS** button and press F7 or click the smiley face in the upper right corner of the chart. You can also right-click on the chart and select 'Expert Advisors' and then 'Properties'.

```
"__GLOBAL SETTINGS____";  
AccountIsSTP = true;  
EnableSounds = true;  
AutoGMTOffset = true;  
ManualGMTOffset = 0;  
CurrencyStrengthDays = 2;
```

**AccountIsSTP** - If your broker is not ECN or STP disable this switch. The only difference is that when it is active it will place the TP and SL immediately after the trade is placed, not at the moment of entry, as ECN/STP brokers generally don't allow this. ECN stands for Electronic Communications Network, STP stands for Straight-Through-Processing.

**EnableSounds** - When a trade is closed a sound will be played depending on whether it was a profitable or losing position.

**AutoGMTOffset** - This will find your brokers GMT offset automatically and is displayed on the market session screen, but disable it if you want to use a different GMT. This won't work during backtesting so you'll need to set a manual GMT offset aswell.

**ManualGMTOffset** - This is used during backtesting and will override **AutoGMTOffset**, but if you want to use it during live trading or when NOT testing, AutoGMTOffset needs to be switched off.

**CurrencyStrengthDays** - The period of FX Reactor's Currency Strength Meter in days. The larger the number the further back the Meter will look at the daily highs and lows of each currency pair to gauge the relative currency strength, therefore longer the trend of the pairs on the Top Trending Pairs screen. The default value of 2 means all currencies are gauged using today and yesterday's high/low values.

```
"__TRADE SETTINGS____";  
LotSize = 0.1;  
TakeProfit = 0;  
StopLoss = 0;  
TrailStop = 0;  
BreakEven = 0;  
BEProfit = 0;  
Slippage = 3;  
MaxSpread = 5;  
MaxOpenTrades = 10;  
MagicNumber = 131619;
```

**LotSize** - The default position size for any order made via the Trade Panel if **RiskMan-**

**agement** is not used. If **RiskManagement** is enabled but there is no SL set, the default Lot size will be used.

**TakeProfit** - The TP level in pips from your entry price. 0 is inactive.

**StopLoss** - The SL level in pips from your entry price. 0 is inactive.

**TrailStop** - Sets a trailing stop of the pip value specified and will not be triggered unless price has moved into profit by the same number of pips. 0 is inactive.

**BreakEven** - If price moves into profit the specified number of pips, SL will be moved to break-even level (order entry price). 0 is inactive.

**BEProfit** - The break-even pip offset value to add to the order entry price for taking a profit. 0 is inactive.

**Slippage** - The maximum allowed deviation value in pips of the quoted price at entry to the actual price granted by your broker. If you are getting frequent requotes try increasing this number.

**MaxSpread** - The maximum allowable spread commission at time of entry before a trade is placed. This helps to protect against big spread markups when major economic news is released. **MaxSpread** may need to be adjusted to backtest or optimize on weekends when the spread is higher than usual.

**MaxOpenTrades** - The maximum number of trades allowed to be opened at one time.

**MagicNumber** - Specifies the trades which FX Reactor will manage. All trades opened by FX Reactor will be identified by the magic number to avoid confusion between different EA's and manual trades. Therefore this number shouldn't be the same as the magic number of any other EA you are using at the same time. If you want FX Reactor to manage your manual trades, change the number to 0.

```
"__MONEY MANAGEMENT_____";  
CurrencyTP = 0;  
CurrencySL = 0;  
GlobalEquitySL = 0;  
RiskManagement = false;  
RiskPercent = 2;
```

**CurrencyTP** - This closes all your trades when their net profit reaches this value. The value represent units of your account currency, ie. dollars, euros, etc. This can be useful for basket trading over multiple instruments when the combined profit of all trades is sought. When **RiskManagement** is enabled, all trades will be closed when your Account Equity reaches the percentage of profit defined by **RiskPercent** (eg. 2%). 0 is inactive.

**CurrencySL** - This closes all your trades when their net loss reaches this value. The value represent base units of your account currency, ie. dollars, euros, etc. When **RiskManagement** is enabled, all trades will be closed when your Account Equity reaches the percentage of loss defined by **RiskPercent** (eg. 2%). 0 is inactive.

**GlobalEquitySL** - All trades will be closed when your account equity has dropped below this value in units of your account currency, ie. dollars, euros, etc. Set it at the minimum account balance you would allow it to fall to. Eg, if your account balance is \$10,000 and you are only prepared to risk 30% of it in total, set the **GlobalEquitySL** value as 7000. 0 is inactive.

**RiskManagement** - If enabled, this calculates the Lot size to represent a percentage of your account balance to risk on each trade, based on the stoploss value. If SL is 0, the default Lot size will be used instead.

**RiskPercent** - The percentage of your account balance to risk on each trade. Requires **RiskManagement** to be enabled.

```
"__TRADING SIGNALS____";  
MinDifference = 30;  
MinRetracement = 0;  
CounterTrendSignals = false;  
NoDoubleTrades = true;  
CloseOnNewBar = false;
```

**MinDifference** - The difference between the two currency strengths in the pair must be greater or equal to this value to give a trading signal. 0 is inactive.

**MinRetracement** - The current pip retracement from the daily high or low (whichever is nearer) of the pair must be greater or equal to this value to give a trading signal. 0 is inactive.

**CounterTrendSignals** - Reverses the trend-following trade signals to give counter-trend signals. So if your strategy is giving a Buy signal, this switch will make it give a Sell signal instead. This does the same thing as the REVERSE button.

**NoDoubleTrades** - If you already have active trades that match the pairs on the Top Trending Pairs screen, an asterisk (\*) will appear before the name of the pair, meaning that it is already in your basket and will not be traded again if the **Top 1** or **Top 3** buttons are clicked.

**CloseOnNewBar** - All open trades are closed at the opening of the next bar. The length of the trade will vary according to the timeframe of the chart that FX Reactor is on, so if the chart is M5 the trade will last maximum 5 minutes, if the chart is H4 it will last maximum 4 hours before being closed. If the chart is D1 all trades will close at the beginning of the new daily bar.

```
"__AUTO STOPS____";  
RiskRewardRatio = 1;  
AddPipsToStops = 0;  
RangeStops = true;  
RangeStopsPeriod = 10;  
SessionRangeStops = false;  
SessionRangeMultiplier = 1;  
FibonacciStops = false;
```

```
FibTPLLevel = 0;  
FibSLLevel = 100;  
FibPeriod = 240;
```

**RiskRewardRatio** - Determines the TP by a ratio of SL distance from the entry price. A value of 1 gives a TP of equal value to the SL. Applies to **RangeStops** mode and **SessionRangeStops** mode. Decimal values are allowed.

**AddPipsToStops** - Adds the number of pips specified to the SL and TP. Applies to the all three Auto Stops modes.

**RangeStops** - Enables automatic stoplevels to base the SL at the recent low or high within the last number of bars defined by **RangeStopsPeriod**. The TP is set at a distance proportional to the SL defined by **RiskRewardRatio**. The 'STOPS' menu button on the chart must be enabled aswell. See Auto Stops section.

**RangeStopsPeriod** - The number of previous bars to find the highest high or lowest low for the Stoploss. Applies to default **RangeStops** mode only.

**SessionRangeStops** - Uses the average hourly range of the last 5 trading days to determine the SL. The TP is set at a distance proportional to the SL defined by **RiskRewardRatio**. The 'STOPS' menu button on the chart must be enabled aswell. See Auto Stops section.

**SessionRangeMultiplier** - Multiplies the pip value of the average hourly range to use for the SL. A multiplying value of 2 will double the SL distance, so if the hourly range is 25 pips, the SL will be 50 pips. The hourly range is shown on the market session display in the bottom left.

**FibonacciStops** - Activates the auto Fibonacci retracement tool on the chart to determine stop levels. SL and TP are set by the **FibTPLLevel** and **FibSLLevel** percentage values. The 'STOPS' menu button on the chart must be enabled aswell. See Auto Stops section.

**FibTPLLevel** - Sets the TP at the specified fib level using the Fibonacci retracement tool on the chart. The percentage level can be any value, not just the ones shown.

**FibSLLevel** - Sets the SL at the specified fib level using the Fibonacci retracement tool on the chart. The percentage level can be any value, not just the ones shown.

**FibPeriod** - Sets the bar period of the Fibonacci retracement tool on the chart. It will use the highs and lows within the defined period number of bars back from the current bar to draw the Fibonacci retracement.

```
"__SENTIMENT METER____";  
SentimentPeriod = 1;  
SentimentMode = 0;  
SentimentTimeframe = 1440;
```

**SentimentPeriod** - Sets the bar period of the Sentiment meter shown in CHART mode. The Sentiment meter is identical to the ASO indicator (Average Sentiment Oscillator) in-

cluded with FX Reactor, which is in the Custom Indicators folder. It averages the sentiment from the period number of bars back from the current bar. For more information on this indicator visit [www.codebase.mql4.com/7214](http://www.codebase.mql4.com/7214)

**SentimentMode** - Sets the mode of the Sentiment meter shown in CHART mode. 0 = Both intrabar and grouped bar sentiment (averaged). 1 = Intrabar sentiment only (leading and more sensitive), derived from OHLC bar values. 2 = Grouped bar sentiment (smoother but more lagging), derived from a group of bars (defined by period).

**SentimentTimeframe** - Sets the timeframe of the Sentiment meter shown in CHART mode. 0 = Current chart timeframe. 1 = M1, 5 = M5, 15 = M15, 30 = M30, 60 = H1, 240 = H4, 1440 = D1, 10080 = W1, 43200 = MN1.

```
"__LATENCY (ms per loop)____";  
Comment1 = "Higher values reduce CPU load.";  
Comment2 = "Lower values increase responsiveness.";  
Latency = 100;  
RunTickMode = false;
```

**Latency** - The number of milliseconds between each loop of the program code, the default value (100) is already quite CPU intensive so it is advisable not to lower it much further, but if the computer is slowing down too much or the meters display is flickering, increase this value to 200 or more. Using a time based loop instead of a tick based loop helps the updating and trades to be executed faster.

**RunTickMode** - Runs FX Reactor on a tick based loop, which will use less of the CPU. The updates will occur on every tick instead. The menu buttons will also be very unresponsive so if using this setting be careful not to click the trade buttons repeatedly.

```
"__DISPLAY____";  
ShowPairAccuracy = true;  
AdjustLotsIncrement = 0.01;  
SessionHeatmapTuning = 0;  
FibColor = MediumSeaGreen;  
ScreenText = MediumSeaGreen;  
ScreenHlghtText = C'100,230,143';  
PairInBasket = MediumSeaGreen;  
CurrencyUp = Lime;  
CurrencyDown = Red;
```

**ShowPairAccuracy** - Shows FX Reactor's accuracy percentage in the top left corner of the chart. This is based on the amount of available currency pairs that your broker provides, if all 28 pairs are available, the accuracy of the currency strength meter will be 100%.

**AdjustLotsIncrement** - This changes the Lot size increase/decrease amount on the 1-Click trade panel.

**SessionHeatmapTuning** - Adjusts the colour ranges of the Heatmap in Session mode if the display is not very detailed. Adjust up or down by increments of 1 or -1.

**FibColor** - The colour of the auto fibonacci retracement tool.

**ScreenText** - The colour of the text on FX Reactor's screens.

**ScreenHlghtText** - The colour of the Top 1 pair title on the list of trending pairs.

**PairInBasket** - The colour of the pair if it is being actively traded on the list of trending pairs.

**CurrencyUp** - The colour of rising values on FX Reactor's screens.

**CurrencyDown** - The colour of falling values on FX Reactor's screens.

## Default Settings

```
"__FX Reactor v.1.0 © 2012____";
"=====____";
"__GLOBAL SETTINGS____";
AccountIsSTP = true;
EnableSounds = true;
AutoGMTOffset = true;
ManualGMTOffset = 0;
CurrencyStrengthDays = 2;
"__TRADE SETTINGS____";
LotSize = 0.1;
TakeProfit = 0;
StopLoss = 0;
TrailStop = 0;
BreakEven = 0;
BEProfit = 0;
Slippage = 3;
MaxSpread = 5;
MaxOpenTrades = 10;
MagicNumber = 131619;
"__MONEY MANAGEMENT____";
CurrencyTP = 0;
CurrencySL = 0;
GlobalEquitySL = 0;
RiskManagement = false;
RiskPercent = 2;
"__TRADING SIGNALS____";
MinDifference = 30;
MinRetracement = 0;
CounterTrendSignals = false;
NoDoubleTrades = true;
CloseOnNewBar = false;
"__AUTO STOPS____";
RiskRewardRatio = 1;
AddPipsToStops = 0;
RangeStops = true;
RangeStopsPeriod = 10;
SessionRangeStops = false;
SessionRangeMultiplier = 1;
FibonacciStops = false;
FibTPLLevel = 0;
FibSLLevel = 100;
FibPeriod = 240;
"__SENTIMENT METER____";
SentimentPeriod = 1;
SentimentMode = 0;
SentimentTimeframe = 1440;
"__LATENCY (ms per loop)____";
Comment1 = "Higher values reduce CPU load.";
Comment2 = "Lower values increase responsiveness.";
Latency = 100;
RunTickMode = false;
"__DISPLAY____";
ShowPairAccuracy = true;
AdjustLotsIncrement = 0.01;
SessionHeatmapTuning = 0;
FibColor = MediumSeaGreen;
ScreenText = MediumSeaGreen;
ScreenHightText = C'100,230,143';
PairInBasket = MediumSeaGreen;
CurrencyUp = Lime;
CurrencyDown = Red;
```



## END USER LICENSE AGREEMENT

### Software License Agreement for FX Reactor

IMPORTANT- PLEASE READ CAREFULLY: BY INSTALLING THE SOFTWARE (AS DEFINED BELOW), AND/OR COPYING THE SOFTWARE, YOU (EITHER ON BEHALF OF YOURSELF AS AN INDIVIDUAL OR ON BEHALF OF AN ENTITY AS ITS AUTHORIZED REPRESENTATIVE) AGREE TO ALL OF THE TERMS OF THIS END USER LICENSE AGREEMENT ('AGREEMENT') REGARDING YOUR USE OF THE SOFTWARE. IF YOU DO NOT AGREE WITH ALL OF THE TERMS OF THIS AGREEMENT, THEN DO NOT INSTALL OR USE THE SOFTWARE.

1. GRANT OF LICENSE: Subject to the terms below, FX Tools hereby grants you a non-exclusive, non-transferable license to install and to use FX Reactor ('Software').

Under this license, you may: (i) install and use the Software on a single computer for your personal, internal use (ii) copy the Software for back-up or archival purposes.

Whether you are licensing the Software as an individual or on behalf of an entity, you may not: (i) reverse engineer, decompile, or disassemble the Software or attempt to discover the source code; (ii) modify, or create derivative works based upon, the Software in whole or in part without the express written consent of FX Tools; (iii) distribute copies of the Software; (iv) remove any proprietary notices or labels on the Software; (v) resell, lease, rent, transfer, sublicense, or otherwise transfer rights to the Software.

2. FX Reactor: You acknowledge that no title to the intellectual property in the Software is transferred to you. Title, ownership, rights, and intellectual property rights in and to the Software shall remain that of FX Tools. The Software is protected by copyright and patent laws of Australia and international treaties.

3. DISCLAIMER OF WARRANTY:

YOU AGREE THAT FX TOOLS HAS MADE NO EXPRESS WARRANTIES, ORAL OR WRITTEN, TO YOU REGARDING THE PRODUCTS AND THAT THE PRODUCTS ARE BEING PROVIDED TO YOU 'AS IS' WITHOUT WARRANTY OF ANY KIND. FX TOOLS DISCLAIMS ANY AND ALL OTHER WARRANTIES, WHETHER EXPRESSED, IMPLIED, OR STATUTORY. YOUR RIGHTS MAY VARY DEPENDING ON THE STATE IN WHICH YOU LIVE. FX TOOLS SHALL NOT BE LIABLE FOR INDIRECT, INCIDENTAL, SPECIAL, COVER, RELIANCE, OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT.

4. LIMITATION OF LIABILITY: You use this program solely at your own risk.

IN NO EVENT SHALL FX TOOLS BE LIABLE TO YOU FOR ANY DAMAGES, INCLUDING BUT NOT LIMITED TO ANY LOSS, OR OTHER INCIDENTAL, INDIRECT OR CONSEQUENTIAL DAMAGES OF ANY KIND ARISING OUT OF THE USE OF THE SOFTWARE, EVEN IF FX TOOLS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. IN NO EVENT WILL FX TOOLS BE LIABLE FOR ANY CLAIM, WHETHER IN CONTRACT, TORT, OR ANY OTHER THEORY OF LIABILITY, EXCEED THE COST OF THE SOFTWARE. THIS LIMITATION SHALL APPLY TO CLAIMS OF PERSONAL INJURY TO THE EXTENT PERMITTED BY LAW.

5. TERMINATION: This Agreement shall terminate automatically if you fail to comply with the limitations described in this Agreement. No notice shall be required to effectuate such termination. Upon termination, you must remove and destroy all copies of the Software.

6. MISCELLANEOUS:

Severability.

In the event of invalidity of any provision of this Agreement, the parties agree that such invalidity shall not affect the validity of the remaining portions of this Agreement.

Entire Agreement.

You agree that this is the entire agreement between you and FX Tools, which supersedes any prior agreement, whether written or oral, and all other communications between FX Tools and you relating to the subject matter of this Agreement.

Reservation of rights.

All rights not expressly granted in this Agreement are reserved by FX Tools.