



Exp - The X

Type : Universal

Class : Automated trading robot with integrated strategies

Terminals : MT4 and MT5

Links:

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[Complete instructions for The X](#)

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[How to buy and update on the website mql5.com](#)

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Description

The X is a Universal multi-currency trading system with the functions of averaging, Additional Opening (The function of opening additional positions during trending markets), virtual stops for MT5 and MT4.

The X Universal is an Expert Adviser for building trading strategies with a large set of functions.

This advisor is a universal trading system with many useful functions and more than 20 signals for opening positions and pending orders.

You can select one of those 20 signals to open a position, and up to 5 of the total 21 filters to filter the opening signals of the standard indicators included in the MetaTrader package.

At each signal, you can adjust the parameters of the indicator, select a Time Frame, and specify a signal bar (via shift function).

Advisor includes such functions as:

1. Averaging against the trend,
2. Additional opening on the trend,
3. Trailing stop,
4. Break-even (Stop-loss on the break-even point),
5. Closing on the total profit or loss,
6. Virtual stop-loss, take-profit and trailing stop.

It has the ability to work on positions or pending orders, Martingale function, trailing stop on Parabolic SAR, Delay restrictions functions, trading on selected time and days of the week and much more

Using our Expert Advisor, you can specify signals and filters, as well as enable the required functions.

This advisor has embodied all the useful functionality used in all advisors including the averaging function. The ability to use several (up to 12) currency pairs on a single chart, use signals from more than 20 standard indicators included in the **MetaTrader5** and **MetaTrader4** packages.

1. **The averaging function allows you** to derive a loss-making position into profit by building a grid of positions in the direction of price movement. If the price goes opposite to an opened position - the Averaging function, based on its user-defined settings, opens a number of additional positions against the trend. When the price direction changes, the previous losses are quickly recovered (due to a number of positions already opened) and overall average of all positions will go into profit quickly. The Averager applies an overall Take Profit level to all positions it had opened earlier.
2. **Martingale functions** - allows you to use the standard martingale mode.
3. Trailing Stop, Break-even (stop-loss on break-even point), closing on total profit or loss.
4. Operation times of the Advisor can be specified by the user.
5. Dynamic Lot Function allows defining the order Lot sizes (Volume) as a percentage of the balance or Equity.

The rich functionality and flexibility of the Expert Advisor will please every trader.

Article: [Programming your trading strategy in our advisor. Work with open source!](#)

Article : [Optimization and testing! Search for advisor settings!](#)

I recommend to get acquainted with our new advisor:

[Exp - The xCustomEA Universal trading advisor on custom indicators. Advisor on the indicator!](#)

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Main advantages

1. Dynamic Lot Function (calculation of the lot size from the current balance or equity), money management;
2. Users can set and adjust trading periods for the EA (restriction of the operation of the advisor to trade on certain times of the day/week);
3. Trailing stop (as soon as the position is opened, or with the standard algorithm: "Only when in profit");
4. MarketWatch ECN (work on ECN group accounts, NDD);
5. Error handling functions for real accounts;
6. Block closing on the total profit and loss with the ability to disconnect all advisors on the account;
7. The break-even (stoploss on the breakeven point) (setting StopLoss to zero or any other desired level);
8. Martingale (increase the next lot size after a loss-making position);
9. Opening and closing of positions can be solely controlled by the signals of the indicator (Opening on a Signal then closing of the position when an opposite signal comes or the filter signal turns off);
10. Close the position when the opposite signal comes
11. "REVERSE" function: Using an opposite strategy: Buy at the Sell signal and Sell at the Buy signal.
12. Averaging Function: Driving a loss-making position Into profit
13. The function of opening additional positions in the direction of the trend (based on the amount of price increase towards the trend direction and/or using one of the available indicators as a filter).
14. Functions of virtual stoploss, takeprofit and trailing stop.
15. Work positions, pending orders, limit orders.



List of indicators and filters

The following standard signals are used by The X, to create Signals and Filters.

Parameters of the expert IndSigToTrade..FILTER_IndSigToTrade2, FILTER_IndSigToTrade5.

Signal:

A Signal to trade occurs when all the conditions for the signal are met. For example:

1. The intersection of lines of MA, or the appearance of a new ZigZag point.
2. The intersection of level 70 for the RSI indicator is a signal. And if the RSI is above the level of 70, then this is already a filter.
3. The signal is what appears when all the conditions are met on the relevant bar. The Advisor accepts the fact of a signal.
4. For example: The light has just turned on. This is a signal because the light has just turned on. When you turned on the light, the person woke up. It's a signal.
5. Opening positions occurs after the signal is committed, the lines intersect, then the position opens. If the lines were crossed earlier, then this is not a signal. The signal has already passed.

Filter:

Filter - The filter is what the indicator shows at that moment. This is not a signal. This is the current position of the indicator.

1. For example : The light was on. This filter is because the light has already been turned on and it is already on. When the light is on, the person no longer sleeps. This is a filter.
2. This is the current position of the indicator, for example the current position of the MA lines relative to each other. Or the current last vertex of ZIGZAG
3. Filtering of signals occurs at the current value to the indicator. If the Fast MA is above the slow MA, then this is the filter that only BUY should open.



Main Signal Indicator (Parameter: IndSigToTrade):

Using this parameter, one of the 20 standard indicators can be used to create Buy & Sell signals.

A Buy or Sell signal for opening a position is generated when the selected Main Signal Indicator changes state. (E.g. RSI indicator just crossed 30% or MA lines just crossed each other).

This happens on the current bar (OWNSIGNAL_Shift=0), or after a certain delay of X bars (specified by the user, OWNSIGNAL_Shift=X).

The Buy & Sell signals from the Main Signal Indicator are filtered by the filters selected by the user (up to 5 filters can be selected).

When a signal is provided by the Main Signal Indicator, the EA checks all the filters. Only when all the filters support the signal, a Buy or Sell position is opened.

If any one of the Filters does not allow the signal, a position will NOT be opened and then the signal is ignored.

No Signal Option: Trading with Filters only

A “No Signal” option has been provided for the Main Signal Indicator.

When “No Signal” option is selected for the Main Signal Indicator (Parameter: IndSigToTrade), the EA uses only the filters to openBuy & Sell positions.

When using filters only, a Buy signal is registered when the current position of all the filter indicators are in Buy state; and a Sell signal is created when the current position of all the filter indicators are in Sell state.

For example:

A Buy position is opened when:

The fast MA is higher than the slow MA, and

RSI is below 30.

A Sell position is opened when:

The fast MA is below the slow MA, and

RSI is above 70.

Moving Average (MA) (Signal 1)

Technical indicator Moving Average (MA) shows the average value of the instrument price for a certain period of time. When calculating the Moving Average, a mathematical averaging of the price of the instrument for a given period is performed. As the price changes, its average value either grows or falls.

The signal is calculated by the mutual arrangement of two moving averages, one of which should have a shorter period (fast MA), and the other, respectively, a larger (slow MA). Their parameters can be specified in variables.

The BUY signal is issued when the fast MA is higher than the slow one, and the signal SELL when the slower is faster than the fast one. The "no signal" state is not used.



Moving Average Convergence / Divergence (MACD) (Signal 2)

Technical Indicator Moving Average Convergence / Divergence (MACD) is the next dynamic trend indicator. It shows the relationship between the two moving average prices.

The Technical Indicator MACD is constructed as the difference between two exponential moving averages (EMA)

MACD is most effective in conditions where the market fluctuates with a large amplitude in the trading corridor. The most commonly used MACD signals are intersections, overbought / oversold conditions and discrepancies.

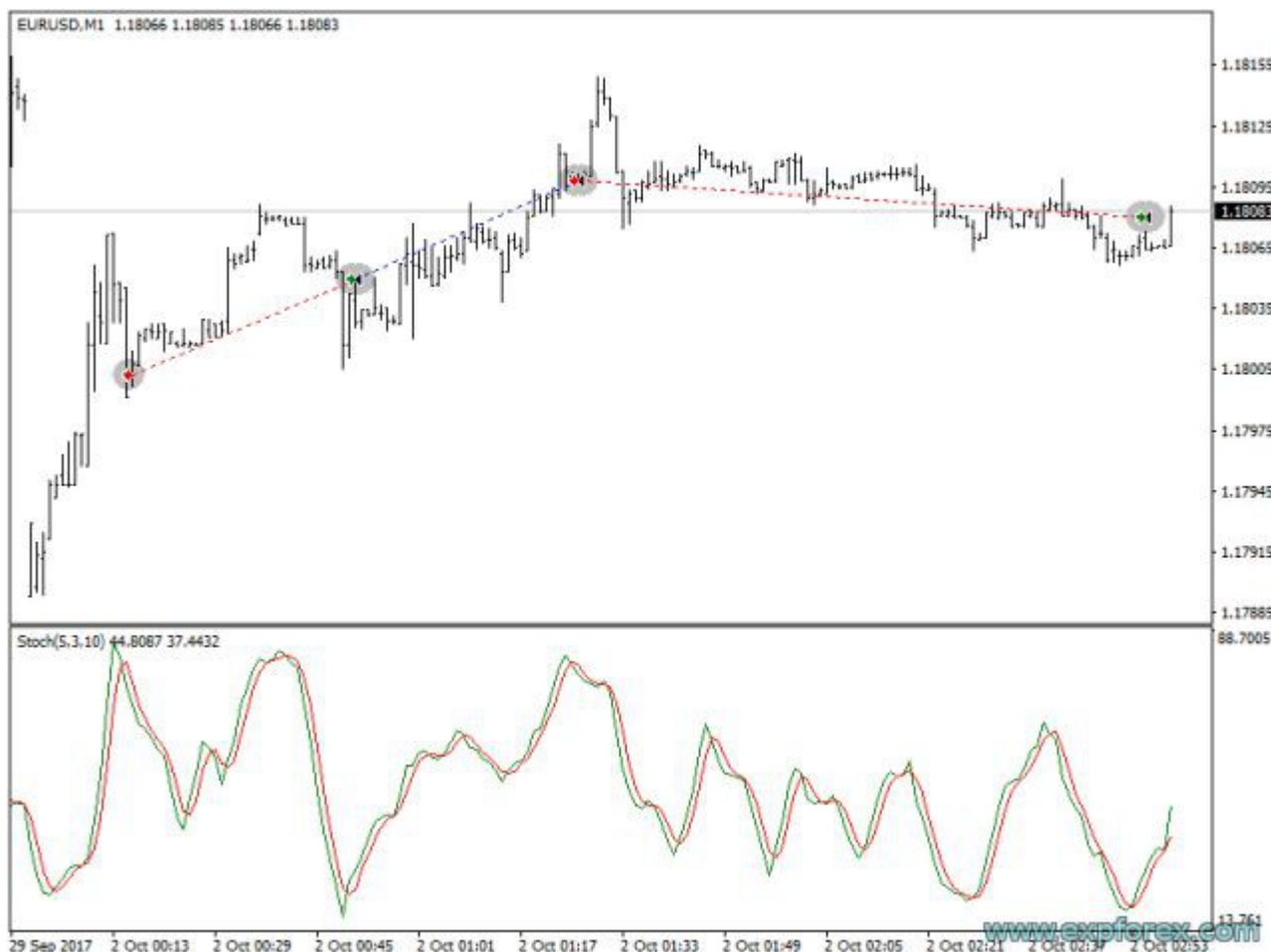
Operates with four variables. Signals are also simple: BUY - the main line above the signal line, SELL - the main line below the signal line. "No signal" is not used.



Stochastic Oscillator (Signal 3)

Technical Indicator Stochastic Oscillator (Stochastic Oscillator) compares the current closing price with the price range for the selected period of time. The indicator is represented by two lines. The main line is called %K. The second line %D is the moving average of the %K line. Usually %K is represented by a solid line, and %D is a dashed line.

The user defines BUY and SELL levels (generally 20-80 or 30-70). The BUY signal is created when the main line (%K) crosses the BUY level from below (going upwards), and the SELL signal is created when the main line (%K) crosses the SELL level while it's going down from the top.



Indicator RSI (Signal 4)

Technical Indicator Relative Strength Index (RSI) is the next oscillator that oscillates in the range from 0 to 100. By introducing the Relative Strength Index, W. Wilder recommended using its 14-period variant. Later, 9 and 25-period indicators were also disseminated. One of the most common methods for analyzing the Relative Strength Index is to find discrepancies in which the price forms a new high, and the RSI can not overcome its previous high. This discrepancy indicates the probability of a price reversal. If the indicator then turns down and falls below its cavity, it completes the so-called "failure swing". This failed swing is considered a confirmation of an early reversal of prices.

Similar to CCI and DeMarker'u. Signals are the exit from overbought (RSIHighLevel) and oversold zones (RSILowLevel).

Therefore, a BUY signal is issued when RSI goes up from a lower value and crosses (RSILowLevel).

A SELL signal is issued when RSI goes down from a higher value and crosses (RSIHighLevel).

The default state is "no signal". The period of the indicator can be set in the RSIPeriod parameter and the settlement price in the RSIPrice parameter.



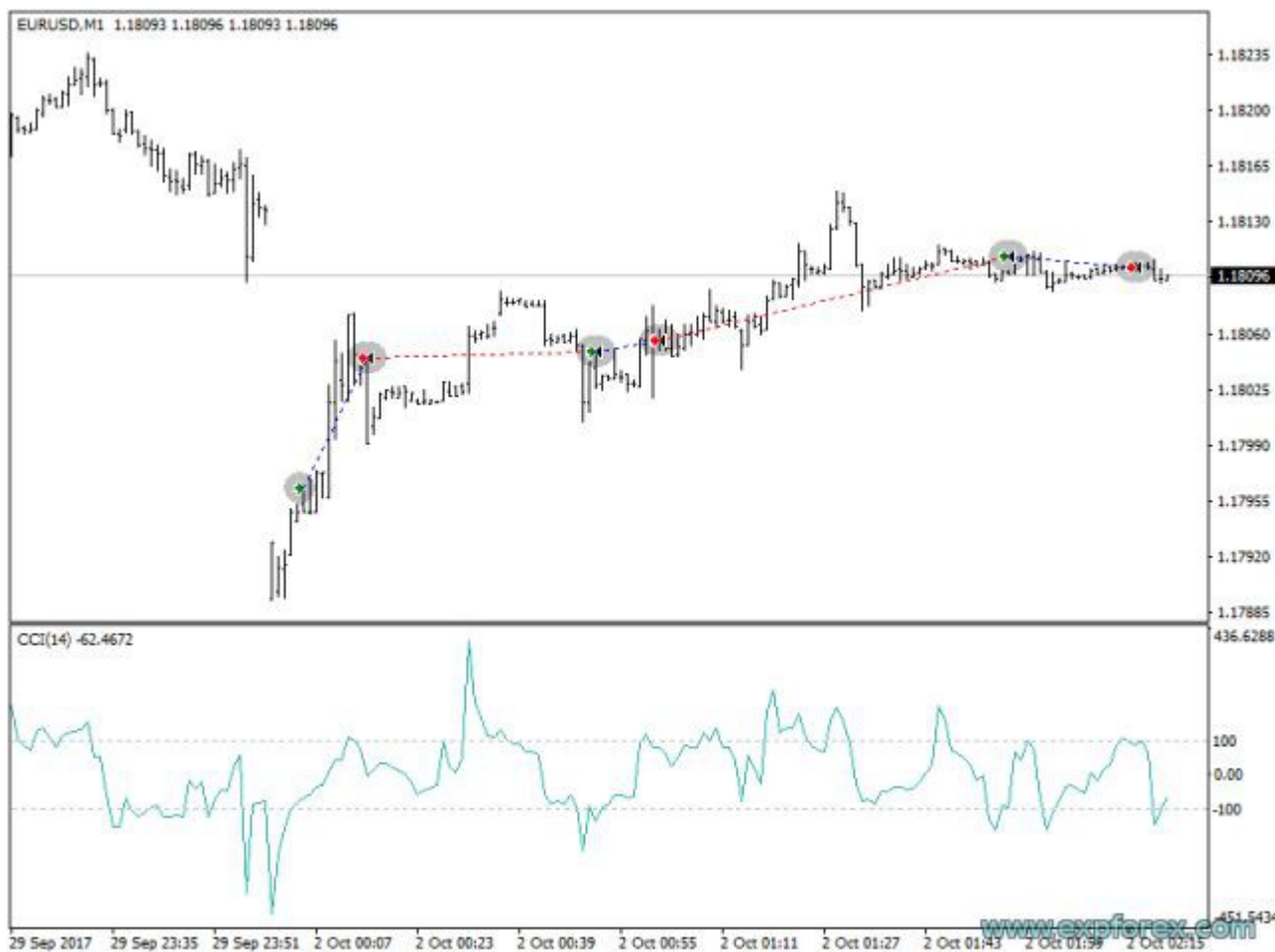
Commodity Channel Index (CCI) (Signal 5)

The technical indicator of the Commodity Channel Index (CCI) measures the deviation of the instrument's price from its average statistical price. High values of the index indicate that the price is unusually high compared with the average, and low - that it is too understated. Despite the name, the Commodity Channel Index is applicable to any financial instrument, not just to goods.

Also, all three signals are used, but the ground state is still "no signal".

The rare appearance of trading signals corresponds to the intersection of the top level from the top down (BUY) and the intersection of the lower level from the bottom up (SELL).

The upper and lower levels are determined by the value of the external parameters CCIHighLevel and CCILowLevel. The period and price of calculating the indicator are determined by the values CCIPeriod and CCIPrice.



Williams Percent Range (WPR) (Signal 6)

Technical Indicator Williams' Percent Range (% R) is a dynamic indicator that determines the state of overbought / oversold. Williams' Percent Range is very similar to the technical indicator [Stochastic Oscillator](#) . The difference between them is only that the first has an inverted scale, and the second one is constructed using internal smoothing.

Williams' Percent Range Technical Indicator (%R) is a dynamic technical indicator, which determines whether the market is overbought/oversold. Williams' %R is very similar to the Stochastic Oscillator. The only difference is that %R has an upside down scale and the Stochastic Oscillator has internal smoothing.

Indicator values ranging between -80% and -100% indicate that the market is oversold. Indicator values ranging between -0% and -20% indicate that the market is overbought. To show the indicator in this upside down fashion, one places a minus symbol before the Williams' Percent Range values (for example -30%). One should ignore the minus symbol when conducting the analysis (Meta Trader 5).

It is similar to RSI, CCI and DeMarker.

Signal BUY - the intersection of the level of overbought (WPRHighLevel) from top to bottom,

the SELL signal is the intersection of the oversold level (WPRLowLevel) from the bottom up.

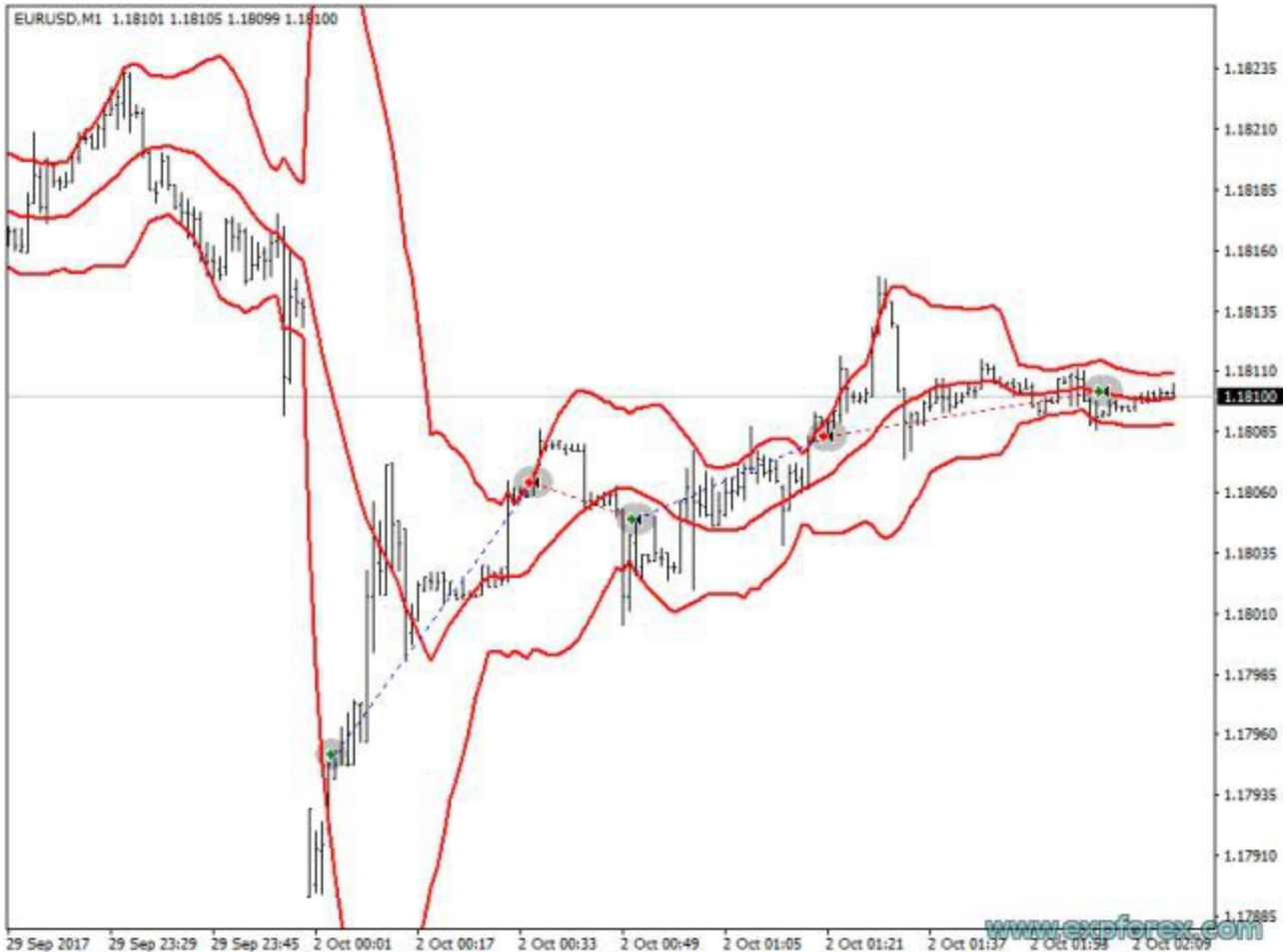
All the rest is "no signal". Only the parameter of the indicator period can be changed from outside - WPRPeriod.



Bollinger Bands (Signal 7)

Bollinger bands (Bollinger Bands, BB) are similar to [Envelopes](#). The difference between them is that the boundaries of the Trading Lanes (Envelopes) are located above and below the [moving average](#) curve at a fixed distance expressed in percent, while the Bollinger Bands boundaries are constructed at distances equal to a certain number of standard deviations. Since the magnitude of the standard deviation depends on volatility, the bands themselves adjust their width: it increases when the market is unstable, and decreases in more stable periods.

There are all three types of signals: BUY - the closing price of the previous candle below the lower line, SELL - the closing price of the previous candle above the upper line, "no signal" - the price of closing the candle between the lines.



Indicator Envelopes (Signal 8)

Technical Indicator Envelopes are formed by two **moving averages**, one of which is shifted up and the other is down. The choice of the optimum relative magnitude of the displacement of the boundaries of the strip is determined by the volatility of the market: the higher it is, the greater the shift.

Since the appearance and essence of the indicator is a channel, the signals are similar to signals when working in a channel. BUY - the price of closing the candle below the bottom line, SELL - the price of closing the candle above the top line and "no signal" - the closing price between the lines.



Alligator (Signal 9)

Most of the time the market does not move anywhere. Only 15-30% of the time the market forms some trends and traders who are not in the exchange hall, almost all of their profits are extracted from trend movements. My grandfather often repeated: "Even a blind chicken will find grain if it is fed at the same time." We call trading in the "blind chicken market" trend. Although it took us years, we still developed an indicator that always allows us to "keep gunpowder dry" until we are in the "blind chicken market."

Bill Williams

Technical Indicator Alligator is a combination of the Balance Lines ([Moving Averages](#)) using fractal geometry and nonlinear dynamics.

Also for all lines, the same averaging method is used (AlligatorMethod) and the settlement price (AlligatorPrice). The peculiarity of the indicator is that all lines have a positive shift to the right. This allows you to safely read the values of the indicator on the current bar, as they are already accurately formed and are not subject to change.

The BUY signal is the lip line above the dentition line, and the line of teeth is above the jaw line, the SELL signal is the lip line below the dentition line, and the line of teeth is below the jaw line. In all other cases, there is no signal.



Moving Average of Oscillator (OsMA) (Signal 10)

The Technical Indicator Moving Average of Oscillator (OsMA) is the difference between the oscillator and the smoothing of the oscillator. In this case, as the oscillator, the main MACD line is used, and as the smoothing, the signal line is used.

The signals are slightly different: BUY - the histogram value is above zero, SELL - the value of the histogram is below zero. The "no signal" state will only be in those rare cases when the OsMA value is zero.



Awesome Oscillator (AO) (Signal 11)

Technical Indicator Awesome Oscillator (AO) is a 34-period simple moving average constructed on the average points of bars $(H + L) / 2$, which is subtracted from a 5-period simple moving average constructed at the central points of bars $H + L) / 2$. He accurately tells us what is happening at the current time with the driving force of the market.

Has no parameters available to the user. One of the principles of working with the indicator is the search for "saucers". "Saucer" Bill Williams calls two increasing values of bars in the positive area, between which is a bar with a lower value. Accordingly, the "inverted saucer" - these are two decreasing values of bars in the negative area, between which is a bar with a large value. Thus, to identify the "saucers" will require the last three formed candles (in the code - four). Signal BUY - "saucer", signal SELL - "inverted saucer", "no signal" - all other cases.



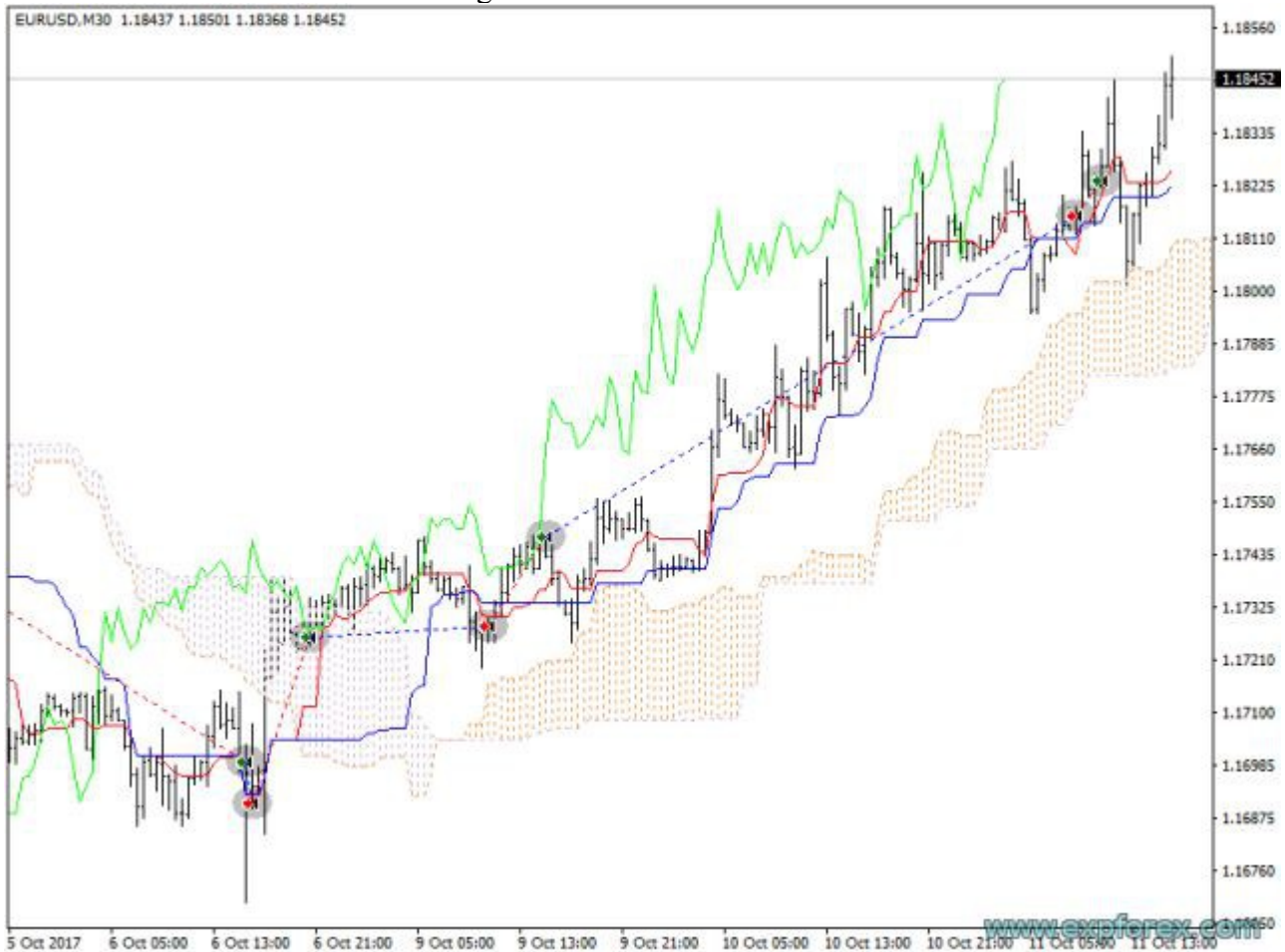
Ichimoku (Signal 12)

Technical Indicator Ichimoku Kinko Hyo (Ichimoku Kinko Hyo) is designed to determine the market trend, support and resistance levels and to generate buying and selling signals. The indicator works best on weekly and daily charts.

the principle of work on the intersection of lines TENKANSEN and KIJUNSEN,

If TENKANSEN is greater than KIJUNSEN - signal to BUY

If TENKANSEN is less than KIJUNSEN - signal on SELL



Accelerator / Decelerator (AC) (Signal 13)

The Technical Acceleration / Deceleration (Acceleration / Decelerator Oscillator, AC) measures acceleration and deceleration of the current driving force. This indicator will change direction before changing the driving force, and it will in turn change its direction before the price change. Understanding that the AU is an earlier warning signal gives obvious advantages.

The same signals as in AO



Bar (Signal 14)

Work in the direction of the bar

If the Close candles are higher than the Open candles (Bull Bar) - BUY signal

If the Close Candles are lower than the Open Candles (Bear Bar) - SELL



ADX (Signal 15)

The Technical Indicator Average Directional Movement Index (ADX) helps to determine the existence of a price trend. It is based on the approaches described in Wells Wilder's book "New concepts of technical trading systems."

The strategy of signals from the directory.

this signal can receive two types of signals for the opening.

if $ADXLevel = 0$, then the following strategy is used:

Wilder suggests buying if $+DI$ crosses above $-DI$, and sell when $+DI$ crosses below $-DI$.

if $ADXLevel$ is not $= 0$, then the following strategy is used:

Wilder suggests buying if $+DI$ crosses above $-DI$ with ADX above $ADXLevel$, and sell when $+DI$ crosses below $-DI$ with ADX above $ADXLevel$.

When using ADX as a filter, the position of the lines is used $+DI > -DI = \text{only BUY}$, $+DI < -DI = \text{only SELL}$,

If $ADXLevel$ is 0, then the permission to open SELL is $DI- > DI+$

If $ADXLevel$ is 0, then the permission to open BUY is $DI+ > DI-$

If $ADXLevel$ is not equal to 0, then the permission to open SELL is $DI- > DI+$ and $ADX > ADXLevel$

If $ADXLevel$ is not equal to 0, then the permission to open BUY is $DI+ > DI-$ and $ADX > ADXLevel$



Bar relatively MA (Filter 16)

The signals to the adviser are filtered according to the indications of the closing price of the bar and Fast \ Slow MA

If the closing price of the bar above MAfast and MASlow - signals only BUY

If the closing price of the bar is below MAfast and MASlow - signals are only SELL

If you want to use this filter as a SIGNAL, you need to set IndSigToTrade = 0 and FILTER_IndSigToTrade1 = 16 (Bar relatively MA)

ZIGZAG (Signal 17)

The signal for opening a position on the ZIGZAG indicator is the intersection of ZIGZAG extremums.

When using signals, it is important to set the shift parameter.

With a value of 0, the position opens immediately towards the intersection of the current Bid price of the last extremum ZIGZAG.

With a value of 1, the position is opened when the intersection is fixed on 1 closed bar.

The last extremum is the fixed extremum 1, when a new segment of ZIGZAG is already postponed from this extremum. The intersection of the maximum and minimum points is the signal for opening the position.

The ZIGZAG filter is the direction of the last segment ZIGZAG 0.



ATR (Signal 18)

The Technical Indicator Average True Range (ATR) is an indicator of market volatility. It was introduced by Wells Wilder in the book "New concepts of technical trading systems" and since then the indicator is used as a component of many other indicators and trading systems.

The indicator True Range often achieves high values in the foundations of the market after a rapid fall in prices caused by panic sales. Low values of the indicator often correspond to long periods of horizontal movement that are observed at the tops of the market and during consolidation. It can be interpreted by the same rules as other volatility indicators. The principle of forecasting with the help of the Average True Range is formulated as follows: the higher the value of the indicator, the higher the probability of a trend change; The lower its value, the weaker the direction of the trend.

ATR shows market volatility.

The trading strategy for ATR as a filter is to confirm the current trend.

When ATR grows it means high market volatility.

Low ATRs mean Low market volatility.

External settings:

ATR_period = 14; - Calculation period for the ATR indicator

ATRprice = PRICE_CLOSE; - The type of price at which the filter will be calculated (Close, Open, High, Low ...)

ATR_MA_period = 1; - The number of candles for calculating the centerline (MA), 1 - means that the indicator calculates the direction of the signal from the current and previous bar (Depending on the shift parameters)

ATR_MULTIPLIER = 1; - The coefficient of the ATR indicator, for example EURUSD ATR = 0.0020, when using the coefficient ATR_MULTIPLIER = 2, The calculation will be included

ATR = 0.0040.

Filter logic according to ATR:

PRICE (ATRprice) of the current bar is higher PRICE (ATRprice) of the previous bar + (ATR * ATR_MULTIPLIER) = high volatility filter BUY

PRICE (ATRprice) of the current bar is less than the PRICE (ATRprice) of the previous bar - (ATR * ATR_MULTIPLIER) = high volatility filter SELL



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Money Flow Index (Signal 20)

Technical Indicator Money Flow Index (MFI) shows the intensity with which money is invested in securities or withdrawn from it. The construction and interpretation of the indicator is similar to the [Relative Strength Index](#) , with the only difference being that MFI also takes into account the volume.

Trade on the indicator Money Flow Index

The Money Flow Index (MFI) shows the intensity with which money is invested in securities or are withdrawn from it. The construction and interpretation of the indicator is similar to Relative Strength

Index, with the only difference being that in MFI the volume is taken into account.

The signals of the indicator are similar to the signals from the indicator RSI;



Fractals (Signal 21)

Fractals - this is one of five indicators of the trading system of Bill Williams, allowing you to detect the bottom or top. The technical definition of a fractal up is a series of at least five consecutive bars, in which, before the highest high and behind it are two bars with lower highs. The opposite configuration (a series of five bars in which, before the lowest low and behind it there are two bars with higher minima) corresponds to the fractal down. On the chart, the fractals have the High and Low values and are indicated by the up or down arrows.

Trading on the Fractals indicator

The signal for opening positions is the intersection of the level of the last fractal:

When you cross up with the price of the last high fractal - the BUY position opens;

When you cross down at the price of the last lower fractal, the SELL position opens;

Filter: Similar to the main signal:

If the price is higher than the last upper fractal, only the BUY position;

If the price is lower than the last lower fractal, only the SELL position;

Attention! Fractal can be drawn at least on 2 closed bars and can be drawn in the past on an unlimited number of bars back. Consider this when analyzing the signal!



Question Answer on the Exp - The X program

What are the values in the parameters in points or pips?

In points! The item is taken from the value of the Point () variable

- If you have a 5 \ 3 digit broker, then 1 point = 0.00001 \ 0.001
- If you have a 4 \ 2 digit broker, then 1 point = 0.0001 \ 0.01

Do you have the kits and settings for this Expert Advisor?

No, I created the Expert Advisor as a designer. This EA requires your optimization. According to your strategy, and according to your capabilities, but using our functions.

[More on Optimizing and Testing The X Advisor](#)

Why are the test results in mt4 and mt5 terminals different?

Because they are different terminals, with different history of quotations, with different principles of the strategy tester.

What settings do you use on your signal?

Default settings. I only test the correctness of the functions, and not the profitability of this advisor.

Why?

Because this advisor was created as a designer. Each user must find their own strategy.

Want my strategy? [TickSniper already set up automatic trading robot](#)

Why are the results with Virtual StopLoss and real Stoploss very different?

A virtual stoploss can not receive an error of order modification due to spread increase, increase of stop level, change of quotations. He always modifies at any situation to the level he needs. All the entries of the advisor lead in global variables.

A real stop-loss can receive modification errors due to spread increase, an increase in the minimum stop level, price changes. Therefore, it can only modify to the level that the server allows it.

Because of the shift, when closing such positions, virtual time closures can have completely different time intervals. Real stoplosses can be closed at other times. This violates the entire logic of opening and closing positions.

As an example: While one position is open, the second one does not open!

Why are the results of the new version and the older version different?

We are updating our program in order to correct minor errors and nuances of the functions. Changing one function and fixing one error can cause the results between the old version and the new version to be different.

But the purpose of our update is to fix bugs and improve the functionality of the functions.

We regret that the results of the old version may differ from the results of the new version. But we will do updates to our program in any case.

I want you to make several changes to the EA

I take new functions very carefully only when these functions will be useful to most users of the system. Unfortunately, I can not program each function separately for each user. You can buy the [open code of the Expert advisor](#) - and program everything you want.

I can add a couple of functions only when I see a sense in these functions. Excuse me.

Can you add a few custom indicators to the Expert Advisor?

No, this advisor was created only for standard indicators. I can not add all the Internet indicators to this Expert Advisor. You can buy the [open code of the Expert advisor](#) - and program everything you want.

Read more about open source [The X Instruction on trading strategy programming](#)

When will you add more indicators?

I add only those indicators I think are necessary. Unfortunately, I can not add all the indicators to the Expert Advisor. The advisor is so crowded with external parameters

This function does not work for me!

I can help you only when you provide a [full report on errors](#)

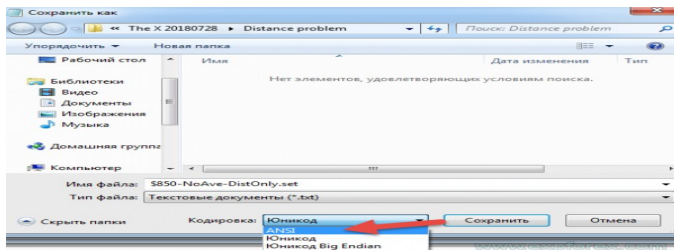
Can I use the Set file with advisor settings between the MT4 and MT5 terminals? Why do not the settings work from mt5 to mt4?

Yes, you can use SET files with settings between two terminals. All variables are the same.

But there is one problem:

Terminal MT5 works with any encoding, and MT4 works only with ANSI text. Therefore, the settings file saved in the MetaTrader 5 terminal will not be opened in the MetaTrader 4 terminal.

In order for the file with the settings from the terminal The X MT5 loaded in the terminal MT4, you need to open this Set file and save it in the ANSI encoding



Function and Parameters

Parameter	Description
OWN Signal options Block of signals and filters	
IndSigToTrade	Select an indicator and a signal to open the first and main position. More than 20 indicators and signals are available No Signal: When chosen, the advisor ignores the main signal and trades on filters. When using the main indicator, the signal is generated as is! on current bar! This means that the signal for opening appears as a fact of committing signal. If there is a signal and the filter does not allow opening the position, then the signal is ignored. When using NoSignal, you can ignore the fact of committing the main signal and work on filters. When using filters, the signal is the current position indicators.
TF_IndSigToTrade1	The timeframe for 1 main indicator. You can select the Time Frame by which the indicator will receive signals. Period_Current - the current Timeframe
Signal_Reverse	Flip the signals of this indicator. This option reverses the signals of the main indicator only.
ClosePositionifChangeOWN Signal	Enable \ Disable closing of positions on the opposite signal of the main indicator, without the participation of other filters and other parameters The ClosePositionifChangeOWNSignal parameter is divided into 3 values: 1. False (off) 2. True (included), 3. OnlyifProfit (Only if positions are in profit);
OWNSIGNAL_shift	The bar number for the signal that the indicator will generate, 1 = last closed bar, signals on such bar are considered complete. 0 = Current open bar, signals on this bar are considered drawing. More about this parameter: Detailed article on signal bars
FILTER_IndSigToTrade	Selecting an indicator and signal for filtering signals from the main indicator More than 15 indicators and filters. Warning: Some indicators and filters are not compatible with each other. Therefore, by including a filter, you can wait a long time to open positions! Be attentive and check your settings on the strategy tester
FILTER_TF_IndSigToTrade	Timeframe for the filter. You can select the Time Frame by which the indicator will receive the filter signals. Period_Current - the current timeframe. For example: When using MA as the main signal with TF = M30, you can enable filtering on the older MA with TF = H4
Filter_Reverse	Flip the signals of this filter. This option reverses the signals of only this filter. For example: The MA main indicator shows BUY but the older MA indicator shows SELL, when using this function we turn over the signals of the older MA and get the aggregate signal BUY

Parameter	Description
FILTERSIGNAL_shift	The bar number for the signal that the indicator will generate, 1 = last closed bar, signals on such bar are considered complete. 0 = Current open bar, signals on this bar are considered drawing. More about this parameter: Detailed article on signal bars
Signal options Additional signal processing unit	
Show_alert_without_opening_positions	If this option is enabled, the Expert Advisor will not open a new position on the signal, but only notify the user that a new signal has appeared. In this case, all other functions will work in the normal mode. Allows the user to open a position on their own if the advisor has issued a signal. But the EA does not make this deal and does not open the position, but only alerts the user about the signal.
OpenBarControlOnly	The work of an advisor is only on open bars. This mode allows you to simulate the work of the Advisor on opening a bar (as in the strategy tester). When this mode is enabled, the Expert Advisor will trade exactly as in OpenPriceOnly testing mode. All! Advisor functions will be executed 1 !! once at the opening of a new bar (depending on TF, which TF you have installed, such timeframe will be used), including Modification, Trailingstop, Averaging, opening of signals, etc.
ControlNewBarforSIGNAL	check the indicator signal only each new bar (without checking on each tick), Works only when OWNSIGNAL_shift >= 1 and IndSigToTrade! = NoSignal (with NoSignal, the Expert Advisor checks the values of the filters are each tick) When ControlNewBarforSIGNAL = true, the optimization speed is increased by 1.5 times
ReverseSignal	Flipping the overall strategy signal received from the Main Indicator + filters!
Opening Filter options Item opening filters	
TypeTradeBUYSELL	direction of trade: Buy and Sell Only Buy Only Sell In this case: If you use pending orders and work only in 1 direction: every time a new signal is received, the old pending order will be deleted and set to a new price.
MinuteToOpenNextPosition	(Permission to open the next signal after the last open position) if there are no open positions, the adviser considers the time from the last closed position. Time is considered to be of the same type. If the BUY signal is then read from the last open / closed BUY ... the number of minutes to open the next deal on the signals of indicators. Allows you to filter deals when using ONLYOnePosbySignal = false.
DistanceToOpenNextPosition	Minimum Distance to open the next position on the main signal (If ONLYOnePosbySignal = false is set and OnePosPerDirection=false). If DistanceToOpenNextPosition is above 0, then the next position can be opened only when the previous position on the signal has passed DistanceToOpenNextPosition of profit points!

Parameter	Description
	If DistanceToOpenNextPosition is below 0, then the next position can be opened only when the previous position on the signal is at a distance DistanceToOpenNextPosition points in both sides of the profit or loss!
OpenOppositePositionAfterStoploss	open the opposite position when closing the current stoploss. Opens the opposite position immediately after receiving the stoploss of the previous deal without using indicator signals. If the last position was closed by stoploss, the Expert Advisor will immediately open the opposite position
OnlyOnePosbySignal	Trade only 1 current main position of one direction. If the Expert Advisor opens the SELL position, then all other signals on the SELL will be ignored
OnePosPerDirection	Opening of 1 deal on 1 direction eg: if OnePosPerDirection = true and OnlyOnePosbySignal = false then the advisor can open 1 Buy deal on a signal and 1 Sell deal on a signal if OnePosPerDirection = false and OnlyOnePosbySignal = true then the advisor can only open one deal at a signal, either Buy or SELL if OnePosPerDirection = false and OnlyOnePosbySignal = false then the advisor can open any deals for each indicator signal
OnlyOnePositionPerMagic	Opening of 1 position on 1 magic, The advisor checks whether there are open positions for this magic number in other currency pairs. If there is no position, the advisor will open the deal at the signal, and the remaining advisors will wait for the completion of this deal. If OnePosPerDirection = false, then OnlyOnePositionPerMagic = true works like this: 1 position by magic number is allowed; If OnePosPerDirection = true, then OnlyOnePositionPerMagic = true works as follows: 1 position of each direction is allowed by magic number;
OnlyAlternateSignals	OnlyAlternateSignals Allows you to open positions only one by one. If the last closed position was SELL, the next can be opened only BUY! It is necessary to trade the main indicator in No Signal mode
MAX_BUY_POSITION	limit of the maximum number of BUY deals. The positions opened by signals of indicators are taken into account. The averaging and refilling positions are not taken into account
MAX_SELL_POSITION	the parameter for limiting the maximum number of SELL deals. The positions opened by signals of indicators are taken into account. The averaging and refilling positions are not taken into account
MaxSpreadToNotTrade	The maximum spread at which the advisor can open a position If the current spread at the time of receiving the signal is greater than the specified value, the indicator signal is ignored until the spread is less than the specified value.
MinSpreadToNotTrade	Minimum spread, in which the advisor can open a position Warning: This filter is only used! to open positions by signal, averaging, refilling.

Parameter**Description**

All other functions work in the normal mode.

Warning: This filter is for Positions. For pending orders, this filter does not matter. Therefore, the filter works only when you use the Positions.

Take into account the author's calculation of the commission and the swap when the functions are turned on: Undisturbed (stoploss on the break-even point), Trailingstop, Averaging.

The author's calculation of the commission is based on the formula for calculating the value of 1 point from the open positions for this symbol and the magic, A negative swap and commission participate in the calculation. The function returns the cost of a negative swap and commission in points and takes this into account when working with the Break-even functions (stoploss on the break-even point) and trailing stop.

Attention : If you have a floating spread on your broker, the settlement of the commission is executed and set at the moment of the operation of the Break-even functions (stoploss on the break-even point) and trailing stop, but the spread may increase, which will incur additional loss points. This is not a calculation error!

Also, it is worth considering that when a swap occurs, the advisor recounts the line Break-even (stoploss on the breakeven point) and establishes new stops if the server allows it. (Restriction to the minimum stop level for your StopLevel broker). If the server does not allow to set a breakeven and returns a minimum stop level error, the EA will not be able to modify the position and you can receive additional loss items.

In order to avoid receiving a loss when using a commission with a commission and when receiving a negative swap, we recommend that you increase the distance Break-even (stoploss on a breakeven point) or trailing stop.

The level of Break-even (**stoploss** on the breakeven point) (**LevelWLoss**) can be calculated independently, given the commission.

for example: Commission for opening and closing a position = 2 dollars (EURUSD) per 1 lot. So, in order to cover the loss on the commission, you need to set **LevelWLoss = 2 (points) +1 (control) = 3 points**.

Thus: the advisor will install a break-even (stop loss at the breakeven point) by +3 points, which in turn will cover the loss on the commission.

Include_Commission_Swap**Close options** Block of functions for closing positions!

Closing the positions when the general indicator signal is reversed.

The difference between ClosePosifChange and ClosePositionifChangeOWNSignal is that with ClosePosifChange - a signal change is considered for all filters + the main signal.

and when ClosePositionifChangeOWNSignal - the signal change is considered only on the main indicator.

It also works for pending orders.

ClosePosifChange

Parameter	Description
ClosePosition_After_X_Minutes	Closing the position after the set number of minutes. Also, the Expert Advisor checks the included CloseChangeOnlyInProfit parameter: Closing only profitable positions.
CloseChangeOnlyInProfit	Closing deals on a return signal, only when the current position is in profit.
Pending orders options The block of work with pending and limit orders.	
StopOrderUSE	Open pending orders or limit orders instead of positions. Allows you to set a pending or limit order for the received signal at a distance StopOrderDeltaifUSE points. Thus, we recheck the signal for profitability. If the signal is opened in the right direction of price movement, then the pending order will work through StopOrderDeltaifUSE points. Use Virtual Stop Orders : Exposes a virtual pending stop order at a distance StopOrderDeltaifUSE points; Use Virtual Limit Orders : Exposes a virtual pending limit order at a distance StopOrderDeltaifUSE points; Caution: Only works in Visualization mode or on real graphics, only when the terminal is switched on. Does not work in optimization mode!
StopOrderDeltaifUSE	Number of items for a deferred or limit order
StopOrderDayToExpiration	StopOrderDayToExpiration = number of days for the order expiration. 0 - ORDER_TIME_GTC The order will be in the queue until it is removed 1 - ORDER_TIME_DAY The order will be valid only for the current trading day 2 ... X - ORDER_TIME_SPECIFIED The order will remain valid until the expiry date If the pending order does not work within the specified days, it is automatically deleted.
StopOrderBarToExpiration	The expiration of the pending order in the bars. If StopOrderBarToExpiration = 10 is specified, and TF = M1, then the Pending order will be removed after 10 minutes after installation. Attention: Each broker has its own minimum time parameter for expiration.
ReInstallStopOrdersNewSignalAppears	Reset pending orders if a new signal from the indicators appears. It allows you to take the current BUYSTOP pending order and install a new BUYSTOP at a new level then the indicators showed a new signal.
Trading options Parameters for trading	
Magic	The magic number of the positions opened by the advisor.
Slippage	The level of maximum possible slippage in points when opening and closing positions. Example: Slippage = 1 Maximum deviation when opening a position = Opening price + -1 point. Slippage = 100

Parameter	Description
	Maximum deviation when opening a position = Opening price + -100 point. For example: The price of opening a position when sending an order to the server = 1.12345 But, if during the time of sending and opening a position the price has changed within 100 points, then the position will open with a slip in the range of 1.12245 - 1.12445
MarketWatch	It includes the ability to open positions with stop-loss / take-profit on an account with MARKET execution. The first opens the position, after the successful opening, the levels of StopLoss and TakeProfit are modified.
CommentToOrder	Additional comment to the opened positions. You can specify here an additional comment that will be added to the opened position to differentiate the settings for example.
RoundingDigits	The number of decimal places when a position or order is opened. Choices: Without rounding To 1 digit To 2 digits
TypeFilling	The type of fill positions and orders. Used for MT5 terminal. In AUTO mode, the Expert Advisor tries to determine the fill type automatically. But, in some situations, you need to set the fill type yourself. If, when you open a position, you get an error of 10030 TRADE_RETCODE_INVALID_FILL An unsupported type of execution of the remainder order is indicated. <u>Set the type of fill that your broker indicates.</u> FillOrKill, ImmediateOrCancel, Return
Stops options Parameters of stop orders, StopLoss, TakeProfit	
VirtualStops	The function of including virtual stoploss / TakeProfit \ trailing stop instead of real. Inclusion of virtual (invisible) levels stoploss / TakeProfit \ trailing stop \ Beyond excess (stop loss at break-even point) Completely redesigned the algorithm of Virtual StopLoss \ TakeProfit \ trailingstop \ Absolute (installing stoploss on the break-even point). Now all virtual stops are displayed on the chart and are the key when closing positions on these levels. Data is written in the form of lines and global variables. Note : If you delete a stop line on the chart and global variables - Virtual closing on this line will not work. Attention : Check your experts and indicators to remove lines from the chart and global variables! Attention : Virtual levels are triggered at the current price, after which the closing occurs. During closing, there may be slippage in a couple of points! Attention MT4: In optimization mode, the virtual stoploss / takeprofit does not work.

Parameter**Description**

Attention : When you enable VirtualStops, the testing speed is significantly lower.

Attention : Virtual stops do not have restrictions and server prohibitions. Therefore, they can be installed at the current price! Then there is an immediate closure.

SetMinStops	Automatically normalize all parameters of the Expert Advisor to the minimum acceptable stop levels. With virtual stops - this parameter has no effect. With AutoSetMinLevel, stop levels will be brought to the lowest possible levels allowed on the server; With ManualSet, the user will receive a message stating that the levels of stops in the Expert Advisor are less than the minimum and the Expert Advisor will stop trading.
StopLoss	Stoploss of each position you open in points
TakeProfit	Takeprofit of each open position in points
ForcedModifySLTP	Forced modification of positions, established by the stoploss and takeprofit. This means that the advisor will forcibly modify the stop loss and take profit of all its positions. For example: If the broker's server opened a trade, but did not return its ticket, then the expert will forcibly check all his positions and if he finds out that the stop loss or take profit of the position is 0, the advisor will force the stoploss and takeprofit.
TimeToCheckAverageSpread	The algorithm for the function is taken from our automated tickSniper scalper sales advisor. Added parameters to the Stops options block: - TimeToCheckAverageSpread The number (milliseconds, 20,000 = 20 seconds) for determining the average spread - AutoCheckLowSpread Auto-determination of the low spread. Automatically determines the spread too low (Less than 1 point) and leads all system settings to the lowest possible spread. Allows you to protect the system from reducing the spread on the broker. How to use: In order for the parameter calculated in points to be calculated from the average spread of the currency pair, you need to specify the parameter with sign - For example: StopLoss = 2000 means that StopLoss of each position will be 2000 points! StopLoss = -100 means that StopLoss of each position will be equal to 100 * Average spread, which was calculated by the advisor for TimeToCheckAverageSpread milliseconds. If the spread is 20 points, then stop loss at the time of opening will be 2000 points. With a floating spread, this value always changes. The parameters available for setting in the spread mode: Distance, DistanceAdditionalOpening, StopOrderDeltaifUSE, StopLoss,

Parameter	Description
	TakeProfit, TrailingStop, TakeProfitALL, StopLossALL, LevelWLoss, LevelProfit. <u>The average and current spread, as well as the level of the Auto Spread Low spread will be displayed in our panel in the section Strategy Info</u>
Lots options Parameters for working with lot items	
Lots	A fixed lot to open a position.
DynamicLot	Dynamic lot, Autolot for an open position. Enabling dynamic lot calculation in percent of free margin and other factors. Calculation of our autolot.
LotBalancePercent	Percent for autolot
RiskRate	RiskRate - the rate of your currency against the dollar. By default, RiskRate = 0 - means that the Expert Advisor will try to find the correct rate in the Market Review. In order for Autolot to work adequately with all currency pairs, you need to include the "Show all currency pairs" in the Market Review.
MaxLot	The maximum lot that an advisor can open when calculating an autolot and martingale for the first main position
Martin	The standard multiplication of the lot of the last closed position at a loss. If Martin = 1, then the martingale does not turn on. If Martin = 0, then the Expert Advisor can not open the next position If Martin = 2, then the first lot = 0.1, the second lot = 0.2, and so on, 0.4 - 0.8 - 1.6 If Martin = 0.5, then the first lot = 1, the second lot = 0.5, and so on, 0.25 - 0.125
Averager options The block of functions for averaging positions, opening positions against the trend	
UseAverAdditionalOpening OrderinOne	The number of orders is considered common for both topping and for the averager. Attention! Only for MT4 version
AverageUSE	Turn on the averaging function. If the Main position is lost at a certain number of points, our adviser opens a position of the same type. Thus, averaging the first position. All the functions of the Expert Advisor (trailing stop, Break-even (Stop-loss on the breakeven point ...) will work already from the middle line of positions, which is calculated from all positions of the same type. For example: If the SELL position is opened with a price of 1,200, and the price goes up. Then, if the price is exceeded by 100 points (for example) 1.300 - the advisor opens another SELL position The average line from these two positions = 1.250 The trailing stop and all other functions will work from the middle line of these two positions. Attention: For different lots of positions, the average price is calculated by the mathematical formula.
TakeProfitALL	The distance of the total takeprofit at the opening of the averaging deals. This option is useful only when you turn on AverageUSE.

Parameter	Description
	Sets the specified takeprofit from the current midline of all positions for ALL items Works only when the averaging position is opened
Distance	Distance from the last open position of one type for averaging. The distance between the positions, the grid cell. You can set 100 points, then each new averaging position will be opened after 100 points of loss from the last open position
DistanceMartin	the increase factor is the distance from the average for each subsequent deal. You can set 1.5, then each new averaging position will be opened through 100 +50 (100*1.5) loss points from the last open position. (100,150,225,337,506)
LotsMartin	Increase the lot for the grid positions. The coefficient of increase of each averaging position. For example: Starting lot of the main position = 0.1 LotsMartin = 2, then The next lot of the opened averaging position will be 0.2, 0.4, 0.8 and so on. Attention: The middle line will be calculated using the formula using lots. Allows you to bring the level of Break-Even (stoploss on the breakeven point) (middle line) to the current price. But martingale can be dangerous to your account. Please, calculate this parameter so that your deposit will withstand such a load
LotAdditional	- additional lot for averaging a position for opening against the trend.
MaxOrdersOpen	The maximum number of averaging positions. If the position grid is MaxOrdersOpen, then the following averaging items are ignored.
Averaging_FILTER_IndSigToTrade1	The filter parameters are added to the averaging and additional trend opening blocks.
Averaging_FILTER_TF_IndSigToTrade1	The Expert Advisor checks the indications of the selected indicator (Filter) and allows or forbids the opening of new positions of a averaging or additional opening on a trend.
Averaging_Filter1_Reverse	The following options are available: Selection of the indicator for the filter, Timeframe, Reverse signals
Additional opening Block of functions for additional opening of positions on a trend	
AdditionalOpening	Enabling the opening of additional items. If the Main position goes into profit by a certain number of items, our advisor opens a position of the same type. Thus, averaging the first position. This helps to top up with a lucrative signal. All the functions of the Expert Advisor (trailing stop, Break-even (breakeven point) ...) will work from the middle line of positions, which is calculated from all positions of the same type. For example: If the SELL position is opened with a price of 1,200, and the price goes down. Then, if the price exceeds 100 points (for example) 1.100 - the advisor opens another SELL position The average line from these two positions = 1.150 The trailing stop and all other functions will work from the middle line of these two positions.

Parameter	Description
	Attention: For different lots of positions, the average price is calculated by the mathematical formula.
StopLossALL	The distance of the general stoploss at the opening of additional deals. This option is useful only when you turn on AdditionalOpening. Sets the given stop-loss from the current midline of all positions for ALL positions Works only when the refresh position is opened
DistanceAdditionalOpening	Distance from the last open position of one type for refills. The distance between the positions, the grid cell. You can set 100 points, then each new refill position will be opened after 100 points of profit from the last open position
LotsMartinAdditionalOpening	Increase the lot for the grid positions. The coefficient of increase of each refill position. For example: Starting lot of the main position = 0.1 LotsMartin = 2, then The next lot of the opened refill position will be 0.2, 0.4, 0.8 and so on. Attention: The middle line will be calculated using the formula using lots. Allows you to bring the level of Break-Even (break-even point) (middle line) to the current price. But martingale can be dangerous to your account. Please, calculate this parameter so that your deposit will withstand such a load
LotAdditionalOpening	additional lot for an additional position for an additional opening by trend.
MaxOrdersOpenAdditionalOpening	Maximum number of refilling positions. If the grid positions are equal to MaxOrdersOpen, then the following refill positions are ignored
Additional_FILTER_IndSigToTrade1	The filter parameters are added to the averaging and additional trend opening blocks.
Additional_FILTER_TF_IndSigToTrade1	The Expert Advisor checks the indications of the selected indicator (Filter) and allows or forbids the opening of new positions of a averaging or additional opening on a trend.
Additional_Filter1_Reverse	The following options are available: Selection of the indicator for the filter, Timeframe, Reverse signals
Time Trade options The block of work with the time of trade, the time limit.	
TradeStartStopbyTime	Function of work on time. If TradeStartStopbyTime = false, then the Expert Advisor trades around the clock. If TradeStartStopbyTime = true, then the trading time is enabled:
SeveralTimeWork	You can also specify several time slots for trading in the SeveralTimeWork parameter. Recording format: HH: MM-HH: MM; where: Start trading hour: Minute start trading - Part stop trading: Minute of stop trading. For example, SeveralTimeWork = 3: 00-5: 00; 7: 30-8: 50; 12: 00-15: 00; then the advisor will trade 3 pieces of time. from 3 hours to 5 hours, from 7:30 to 8:50 and from 12:00 to 15:00. All the rest of the time the Advisor will not open new deals.
OpenHour OpenMinute	The Expert Advisor checks the trading time according to the parameters: OpenHour: OpenMinute - the beginning of the trade and CloseHour: CloseMinute -

Parameter	Description
	the end of the trade for 1 day. For example: OpenHour = 5 and OpenMinute = 0, and also CloseHour = 18 and CloseMinute = 59, then the EA will trade every day from 5:00 to 18:59.
ClosePeriod_Minute	If you want to specify the trading period from the start time, you can set the parameter ClosePeriod_Minute - the period in minutes. For example, OpenHour = 6 and OpenMinute = 0 and ClosePeriod_Minute = 180, then the advisor sets the trading time from 6:00 to 9:00 (6 + 180 minutes = 9 hours).
CloseAllTradesByOutOfTime	Also you can close all open trades and pending orders during non-business hours, CloseAllTradesByOutOfTime = true. In this case, the advisor will trade at the time specified above, and when the trading time is over, the advisor will close all open positions and orders. - Not Use = Do not use the function - Positions and Orders = Close positions and pending orders - Only Positions = Closes only positions - Only Orders = Close only pending orders
TradeByDays	In our block of work on time YOU can specify Trading days for trade: TradeByDays For example, TradeByDays = true Days = 1,2,3 - in this case the advisor will trade only on Monday, Tuesday and Wednesday according to the time set above. Or trade around the clock for these 3 days, if time is not set. If YOU specified Days = 1,2,3,4,5 but the parameter TradeStartStopbyTimeFriday = false, the Expert Advisor will not trade on Friday.
DayForOptimization	Also you can set 1 day for optimization in the parameter DayForOptimization. This option is useful in order to determine which days on the optimization were the most profitable. for example, DayForOptimization = 3, then the EA will only trade on Wednesdays.
TradeStartbyTimeMonday	The Expert Advisor starts working on Monday, if set by TradeStartbyTimeMonday = true by the time OpenHourMonday: OpenMinuteMonday For example, OpenHourMonday = 3 and OpenMinuteMonday = 40, then the EA starts trading on Monday at 03:40 on server time (the time of your broker, as indicated in the market review).
TradeStartStopbyTimeFriday	TradeStartStopbyTimeFriday - Trading time for Friday. In our advisor YOU can set the time for trading advisor on Friday. Time options for Friday: OpenHourFriday: OpenMinuteFriday - CloseHourFriday: CloseMinuteFriday For example, you need the advisor not to open new deals on Friday after 18:00, then YOU establish: OpenHourFriday = 0: OpenMinuteFriday = 0 - CloseHourFriday = 18: CloseMinuteFriday = 0 In this case, the advisor will not open new deals after 18:00
CloseFriday	Also you can close all open trades and pending orders on Friday at the set time of 18:00, CloseFriday = true.

BreakEven WithoutLOSS options Block of work with breakeven (Set stoploss to break-even at a certain

Parameter	Description
	moment)
MovingInWLUSE	Enable the Undisturbed function (stop loss at breakeven point) to open positions. Attention: If the averaging or refilling function is enabled, when the 2 or more positions are opened, the Expert Advisor turns on the Break-Even function (stoploss on the break-even point) from the middle line, and not from the opening price of positions
	The level of profit in points on which the Stop Loss is set when this function is enabled.
LevelWLoss	Distance from the opening price to the profitable stoploss 1 = 1 point of profit 0 = Automatic minimum profit mode. Number of points of profit for the Break-even (stoploss on the breakeven point) = Spread of the current currency pair.
LevelProfit	The number of profit items gained by the position for setting a stoploss in the LevelWLoss of profit items
Standard Trailing options Standard trailing stop (Escorting positions, by modifying Stoploss into profit!)	
TrailingStopUSE	Enabling the standard trailing stop function. Note: If the averaging or refilling function is enabled, if you open 2 or more positions, the Expert Advisor turns on the trailing stop function from the middle line, and not from the open position price
IfProfTrail	- if true, the Advisor starts the modification only when the position is gaining profit to Breakeven (setting stop loss on the break-even point) + TrailingStop profit points. - if false - TrailingStop starts working immediately after opening a position and making a profit of 0 points and leaving a position as a profit. In other words: IfProfTrail = false, then the trailing stop starts working immediately after the position is in profit
TrailingStop	Distance trailing stop in points
TrailingStep	Step of stop loss at trailing point in points
SaveTPafterTrailingStop	When enabled, the takeprofit of the modified positions will remain in place. For example: SaveTPafterTrailingStop = false: When executing a trailing stop, the takeprofit of the modified position will be deleted; SaveTPafterTrailingStop = true: When the trailing stop is executed, the takeprofit of the modified position will be saved.
TrailingStop by SAR Parabolic Trailer Stop block (installing and modifying stoploss on the Parabolic SAR indicator points)	
TrailingStopSAR	Enable trailing stop function on the Parabolic SAR indicator. Attention, if the indicator is at a loss for the position, the advisor waits until the parabolic point is in profit for the position.

Parameter	Description
	If we have 2 or more positions of the averager, then the Break-even (stoploss on the breakeven point) is considered from the mid-line of the aggregate positions.
TrailingStopSAR_TimeFrame	Timeframe for indicator
maximum	Indicator settings
CloseALL when Profit or LOSS options	Block of closing on the total profit or loss
TypeofClose	Type of closing on the total profit or loss, in dollars (deposit currency), points, percent of balance, percent equity. The block allows you to close all positions on this symbol, if the total profit or loss of all positions is equal to the set value.
SeparateBuySell	Separate calculation and closing of positions in two different directions BUY and SELL. This function separately closes two directions for total profit or loss. Actual, If ONLYOnePosbySignal = false and OnePosPerDirection = false. Or any settings that allow you to open more than one direction and more than one position in the direction.
CloseProfit	Close positions with the total profit. True - enable, False - disable
prifitessss	The number of units (dollars (deposit currency), points, percent) for closing. If the total profit on the positions of the currency pair is greater than or equal to the value of prifitessss , then all positions will be closed.
CloseLoss	Close positions at a common loss.
lossss	The number of units (dollars (deposit currency), points, percent) for closing.
TrailOptions	Include trailing the total profit when exceeding prifitessss units . This option means the distance from the prifitessss parameter to include profit trailing. For example: prifitessss = \$ 100 (deposit currency) TrailOptions = \$ 10 then , when the position gains a profit of \$ 100, the adviser will not close these positions, but will establish a profit level of \$ 90. Further, if the profit increases by 1 dollar and becomes 101 dollars, the profit level will be fixed at 91 dollars. If the profit goes down and reaches 91 dollars - all positions will close at this level.
TrailOptionsStep	The step of increasing the fixed profit level
BalanceStart	The starting balance, from which the percentage of the balance will be calculated. If 0 = then the current account balance is set.
ForcedClose	Forced closure of all positions after receiving a total profit or loss
MailSend	Send mail when closing
Orderdelete	Delete pending orders when closing positions
OFFAfterClosePROF	Disable the advisor after closing on the total profit
OFFAfterCloseLOSS	Disconnect the Expert Advisor after closing for a total loss

Parameter	Description
CloseTerminalAfterClosePROF	Closing the terminal after closing on the total profit
CloseTerminalAfterCloseLOSS	Close the terminal after closing for a total loss
Limiting losses and profits Limitation of losses and profits for a certain period	
LimitFor	Limit loss and profit for 1 day \ Week \ Month Limiting LimitFor - Limit type day / week / month LimitForLosses - limit on profit LimitForProfits- loss limitation LimitType - Limit type by Dollars, Points, Deposit Interest ClosebyLIMITING - Close the advisor's deals when the Limit is exceeded UseCurrentProfit - Take into account, when calculating the limit, the current profit / loss
	This function is able to disable the work of the Expert Advisor if the Expert Advisor gained a certain profit / loss in the deposit currency for the day \ month \ week. The next work of the adviser will be the next day \ week \ month For example LimitFor = DAY LimitForProfits = 1 Total profit closing = 10 dollars Also you can select LimitType limit type for calculations. In dollars, points, percent of the balance of the account. If you need to close and delete all deals for this Expert Advisor, if you exceed the limits, you can put ClosebyLIMITING = true The UseCurrentProfit parameter disables or allows you to account for the current floating profit / loss for this Expert Advisor In the Limiting losses and profits block, a new type NOTIME was added to the LimitFor parameter , when using this type, the adviser checks the limits during the time from the last close! Attention: works only when using ClosebyLIMITING = true! This type allows you to take into account closed positions and current positions since the last closing of the total limit. It does not count for a day, a week, but for the period between the last closing according to the terms of this block and the current time. When closing by Limits, the counter sets the current time.
DrawDown options The block for controlling the opening of positions in the drawdown	
DrawDown_Level	DrawDown_Level - turn on the drawdown control block Type_DrawDownHR - the type of drawdown calculation based on deals in history and current deals DrawDown_Level_One - the first level of drawdown in percent Type_Deal_Level_One - action when passing the first level of drawdown (disable new signals \ disable averaging of deals or additional opening \ disconnect all deals \ display message) DrawDown_Level_Two - second level of drawdown in percent Type_Deal_Level_Two - action when passing the second level of drawdown (close

Parameter**Description**

all profitable positions \ close all loss-making positions \ close all \ display message)

For example:

DrawDown_Level = true, DrawDown_Level_One = 50, Type_Deal_Level_One = No_NewDeal, DrawDown_Level_Two = 90, Type_Deal_Level_Two = Close_All. With these settings, as soon as the current drawdown of deals in history and current deals exceeds the level of 50% of the current deposit, EA can not open new deals on new signals. At the same time, the averaging functions will work. When the drawdown exceeds 90%, EA immediately closes all deals.

Withdrawal Virtual withdrawal tool in strategy tester for simulating the work with a deposit

In the Tester block, the variable OnTester_Custom_max is added, in which you can write down your criterion of genetic optimization.

More details about the test results: [Statistics](#)

A record in the form of a formula. **For example :**

```
OnTester_Custom_max = "STAT_PROFIT * STAT_TRADES /
STAT_EQUITY_DD"
```

It is mandatory to specify the names of variables, as in the reference book!

OnTester_Custom_max

Added a virtual withdrawal of funds in the tester:

```
testerwd = "===== Tester Withdrawal =====";
```

Withdrawal - Enable virtual withdrawal of funds when testing in the strategy tester;

Withdrawal_mode - withdrawal mode, in the deposit currency, as a percentage of the current balance (currency / percentage);

Withdrawal_amount - Number of withdrawal tools;

Withdrawal_periodicity_days - Frequency of withdrawal in days;

Withdrawal_Max - Maximum withdrawal amount;

Withdrawal_EndOfTest - Withdrawal after the end of testing;

Withdrawal

Only for MT5 version !!!! Symbols options - Set trading on multiple symbols at the same time!

PAIR1 - PAIR12

The ability to install several currency pairs at once for testing in MT5 terminal strategy tester.

If you get an error:

```
2018.05.14 10: 42: 15.916 Core 1 2018.01.01 00:00:00
Check in MarketWatch EURUGBP.m !
```

```
2018.05.14 10:42:15.916 Core 1 2018.01.01 00:00:00
```

```
array out of range in 'Exp - The X 20180511 EXTRA
OPENSOURCE.mq5' (1041.20)
```

Parameter**Description**

2018.05.14 10: 42: 15.916 Core 1 **OnInit critical error**

So you indicated the wrong name of the currency pair!