

"Ilan Dynamic Pro" Expert Advisor

Expert Advisor for MetaTrader 4

The present Expert Advisor is based on the "*Ilan 1.6 Dynamic*" EA which is widely used by the large number of traders and thus deserves increased attention from professional developers producing lots of advisor's modifications. There are many variations of this advisor, each having its own pros and cons, but all these modifications are united by a common position averaging algorithm that is used to close a series of unidirectional orders at the single Take Profit level.

I have created a modification of the EA with the whole code written from scratch and the analytical unit completely redesigned. Now Expert Advisor stands 100% up to its name as it has almost all parameters dynamically variable depending on the situation on the active chart. Dynamically adjustable parameters allow obtaining sufficiently stable operation with different instruments even with the default settings with no initial optimization. At the same time, all important parameters are available for optimization and fine-tuning for a specific instrument and trading conditions. In this "*Ilan Dynamic Pro*" modification I have tried to bring my own vision of effective averaging algorithm implementing the idea led by many years of professional MT4 development experience and my own vision of the Forex market.

Modes of operation

Depending on the signal, the EA can open positions in two directions - buy and sell. If necessary, the Expert Advisor can be customized to work in only one direction.

The volume of the initial order is automatically calculated when the proportional calculation function is enabled. If the price moves against the position, an averaging order is automatically placed. Averaging algorithm can be adjusted flexibly for which the special input parameters are presented. If necessary, the proportional volume calculating algorithm can be turned off in the input parameters of the Adviser. In this case, the Adviser will always start a series in the volume predetermined in the input parameters.

Principle of operation

Expert Advisor starts a series by opening the first order based on the weighted signals sent from the analytical unit. The standard MT4 indicators such as RSI, Stochastic Oscillator, MFI and Bollinger Bands are used as the main analytical unit indicators.

For the dynamic calculation of stop levels and shifts when opening the averaging orders standard MT4 ATR indicator is used.

In case the price moves against the position after the first order has been opened an averaging order meeting the shift conditions is placed. There is the "*Shift K*" variable available in the Expert Advisor input parameters which is an ATR based dynamic shift calculation coefficient.

Same approach is used for Stop Loss and Take Profit levels calculation as long as input parameters include *"Take Profit K2"*, *"Stop Loss K"* and *"Take Profit K1"* coefficients for calculation.

When two or more positions are open simultaneously, an overall Take Profit stop level according to the *"Take Profit K2"* coefficient is being calculated for the entire series. This level becomes mutual for the entire series and the overall stop loss level according to the *"Stop Loss K"* coefficient gets determined.

If a loss for the entire series larger than the *"Maximal drawdown"* number specified in input parameter (which is set as a percentage of the active account balance) is reached during the trading process, the entire series is closed providing you with an advance opportunity to limit possible losses.

Expert Advisor can work during particular hours. For this matter you can specify the desired start time and the end of the trade in *"Start Time"* and *"Stop Time"* input parameters. It will be allowed to start a new series at the appointed time only. If the series has been already started, trading continues until its completion.

Testing and optimization

Before using EA on real account you need to test it on historical data to assess its potential and possible risks. Testing of the Adviser should be carried out only using the *"Every tick"* model as it is the most accurate method of generating ticks. I recommend optimizing all of the input parameters prior to the test. Optimization is preferably carried out using the *"Control Points"* model as it is the most speed and accuracy balanced ticks' generation method. Optimization will take some time, but results of such optimization will be much more accurate than if a faster *"Open prices"* model is used.

Input parameters

Basic Parameters

- **Positions** - select the direction of position opening.
- **Time Frame** - period of the chart at which all the calculations are made.
- **Magic Number** - identification ("magic") number for each order.
- **Start Time** - time when trading starts.
- **Stop Time** - time when trading stops.
- **Balance** - balance reference for the proportional calculation of the starting position volume. When set to *"0"* the function is disabled and the volume of the starting position will be considered equal to the *"Lots"* parameter.
- **Lots** - the reference amount for the proportional calculation of the starting position.
- **Max Lots** - the maximum allowable lots.
- **Stop Loss K** - coefficient for Stop Loss level calculation.
- **Take Profit K1** - coefficient for TakeProfit level calculation.
- **Take Profit K2** - coefficient for the overall series TakeProfit level calculation.
- **Shift K** - coefficient used to calculate the last order shift level in order to enter a new order in the series.

- **Market Execution** - placing Stop Loss and Take Profit for market orders to be done only after the orders are opened. Given parameter should be used when operating with the ECN type account.
- **Slippage** - the maximum deviation from the quoted price in points when opening and closing market positions.
- **Maximal drawdown** - the maximum allowable drawdown in percentage of the active account balance.

Trailing Stop

- **Use Trailing Stop** - enabling the Trailing Stop function. If set to false, Trailing Stop function does not work.
- **Trailing Stop level** - as soon as profit in points becomes equal to or higher than the specified level, command to place the Stop Loss order will be given automatically. The order level is set at the specified distance from the current price. Further, if price changes in the more profitable direction, trailing stop will make the Stop Loss level follow the price automatically, but if profitability of the position falls, the order will not be modified anymore.
- **Trailing Stop step** - step size in points.

Relative Strength Index

- **Period** - averaging period for index calculation.
- **Apply to** - applied price.

Stochastic Oscillator

- **%K period** - period (number of bars) for the %K line calculation.
- **Slowing** - slowing value.
- **Price field** - calculation prices selection parameter.

Money Flow Index

- **Period** - averaging period for indicator calculation.

Bollinger Bands

- **Period** - averaging period for indicator calculation.
- **Deviations** - number of standard deviations from the main line.
- **Apply to** - applied price.

Average True Range

- **Period** - averaging period for indicator calculation.

Common Parameters

- **Comments** - comments when working with the trading server.
- **Sounds** - sound signals when executing trades.
- **Visualization** - visualization of trades on the chart.

Contacts

In case you have any additional questions I am always happy to answer them.

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Wish you all kinds of success at financial markets!