

MQL4 EA DEVELOPMENT PROJECT

Project Details	
Client:	Cornelius
Project Title:	EPPA v2.0
Developer:	
Project Start Date:	2021-07-XX
Project End Date:	2021-07-XX
Agreed Upon Budget:	XX USD
Language	MT4 / MQL4
Compatible Pairs / Indices	All – the EA should be useable on any MT4 chart and pair.
Deliverables	1. Source code in .mq4 2. Compiled.ex4 error free executable
Reference Documents	• n/a

1.0 Trading idea

I am looking for someone who has experience using the indicator "Entry Points Pro MT4", available in the market, to help me to create a simple EA based on its buy and sell signals, indicated by arrows in the chart.

I find that the signals produced by the indicator are quite accurate, however I am unable to act on most of them simply due to normal every day activities.

The EA will, upon receiving a valid signal, open a pending order at some value beyond the close of the signal bar. This pending order will have a TP, and SL defined by the user, relative to the signal bar.

The values for TP, SL etc can be defined either in points, or as a multiple of the ATR of the signal bar.

There will be an option, once a TP has been reached, to transform the TP into a TS with a trailing size defined by the user.

It is assumed that the developer already has access to this indicator. The entry signals (coloured arrows) provided by the indicator will be readable directly from the chart.

It is possible that after the completion of this job, that further more advanced strategies and open / close conditions be added as new jobs to the same developer.

For simplicity, this EA does not use virtual TP, SL and TS management.

It will be possible to define the period during the day, in which the EA trades.

A note about timeframes: The EA will operate on the timeframe of the active chart, since this is where the indicator will be placing its signals. Changing the time frame after an order has been placed and before it has closed shall not interfere with the management of the EA.

2.0 Terms & Definitions

Open Buffer

A user defined value which sets a distance between the signal bar and the potential pending order. It can be defined in either Points or as a multiple of ATR at that time.

SL Buffer

A user defined value which sets a distance between the pending order and the signal bar. It can be defined in either Points or as a multiple of ATR at that time.

Signal Bar

Defined as the bar onto which either a BUY or SELL arrow are placed.

Arrow, BUY

A blue arrow pointing up means that this is probably a good moment to buy. This alone is not signal enough, as we need to wait for confirmation as defined in Section 4.0.



Arrow, SELL

A blue arrow pointing up means that this is probably a good moment to buy. This alone is not signal enough, as we need to wait for confirmation as defined in Section 4.0.



Magic Number

To differentiate between EA's.

Max Spread

If the spread at the time of the open signal exceeds this amount, the EA will not open a position.

Equity Step Size

The amount of free account equity that the EA uses to calculate position size. Note that free account equity is used instead of overall balance, in order to more safely manage the account when several EAs are running in parallel. The default value will be 10000 units of the account currency.

Lots Per Step

The size of the order position, per step of account equity. The default value will be 1.0 lots.

Position Size

The size of the order sent by the EA is a simple function of the Equity Step Size and Lots Per Step variables, as follows:

$$\text{Position Size} = (\text{Account Equity} / \text{Equity Step Size}) \times \text{Lots Per Step}$$

In an example account with a step size of 7500, account equity of 4300, and a lot size of 1.0:

$$\text{Position Size} = (4300 / 7500) \times 1.0 = 0.57 \text{ Lots}$$

3.0 Variables

Setting the Points or ATR value to 0 means that this will not be used. If both Points and ATR are zero or non zero, then the EA shall produce an error and will not operate.

Open Buffer

- Points [10]
- ATR [0] (multiple of current ATR)

SL Buffer

- Points [10]
- ATR [0] (multiple of current ATR)

TP

- Points [25]
- ATR [0] (multiple of current ATR)

TS

- TS Active TRUE / [FALSE]
- Points [15] *(if the set amount is below the minimum allowed by the terminal, for example during off market hours, then do not open a position)*
- ATR [0] (multiple of current ATR)

Trading Hours (terminal time)

- Start Trading Hour [00h00]
- Stop Trading Hour [20h00]

Money Management

- Free Equity [10000]
- Lots Per Step [1.0]

Miscellaneous

- Magic Number [100]
- ATR Period [14]
- Allow BUY [TRUE] / FALSE
- Allow SELL [TRUE] / FALSE
- Max Spread [20]

A note about Points / ATR options above:

For those variables which have the option to use either Points or ATR, only one will be used at any given time. The value that is set to 0 is the one which is not used by the EA. If both of the values are 0, or both are non 0, then the EA will not function.

Note as well that the value entered for ATR is to be a multiple of the ATR on the signal bar. For example, if an order is opened and the signal bar ATR is 50 points, and the multiple value used is 1.5, then the point value used by the EA shall be:

$$ATR \times Multiple = Points \Rightarrow 50 \times 1.5 = 75 \text{ Points}$$

4.0 Trading Signals

- **BUY**
 - Order BUY Confirmation:
 - IF indicator paints a blue BUY arrow, this is the signal bar
 - Open a pending BUY position:
 - at the high of the signal bar, plus [Open Buffer]
 - set the SL at the low of the signal bar, minus [SL Buffer]
 - Order BUY Close:
 - IF the TS Active switch is FALSE
 - Close when either the TP or SL value is hit
 - IF the TS Active switch is TRUE
 - When the TP target is hit, erase the existing TP and SL on the order and replace it with a TS of the indicated amount
 - Order BUY Cancellation:
 - IF the BUY order is not opened before the close of the NEXT bar (signal bar + 1) then on open of signal bar + 2 the order is cancelled.
- **SELL**
 - Order SELL Confirmation:
 - IF indicator paints a red SELL arrow, this is the signal bar
 - Open a pending SELL position:
 - at the low of the signal bar, minus [Open Buffer]
 - set the SL at the high of the signal bar, plus [SL Buffer]
 - Order SELL Close:
 - IF the TS Active switch is FALSE
 - Close when either the TP or SL value is hit
 - IF the TS Active switch is TRUE
 - When the TP target is hit, erase the existing TP and SL on the order and replace it with a TS of the indicated amount
 - Order SELL Cancellation:
 - IF the SELL order is not opened before the close of the NEXT bar (signal bar + 1) then on open of signal bar + 2 the order is cancelled.

The size of the order sent by the EA is a simple function of the Equity Step Size and Lots Per Step variables, as follows:

$$\text{Position Size} = (\text{Account Equity} / \text{Equity Step Size}) \times \text{Lots Per Step}$$

A note about timeframes: The EA will operate on the timeframe of the active chart, since this is where the indicator will be placing its signals.

Additional conditions to consider:

1. If the spread at the time of the open signal exceeds this amount, the EA will not open a position.
2. If the TS option is selected, and the TS value is less than the spread, the EA will not open a position.

5.0 Screenshots and Flow Charts

In the screenshot below are three examples which demonstrate good and bad position opening commands as outlined in Section 4.0. Assume that the Open Buffer is set to 10 points.



Signal 1

A BUY arrow is painted on the signal bar. A pending order should be placed 10 points higher than the close of this bar. The pending order will be hit and the position opened.

Signal 2

A BUY arrow is painted on the signal bar. A pending order should be placed 10 points higher than the close of this bar. The pending order will be hit and the position opened.

Signal 3

A SELL arrow is painted on the signal bar. A pending order should be placed 10 points below. Price however moves in the wrong direction and at the open of signal bar +2, the pending order should be cancelled.

6.0 Lifetime of Signals/Orders/Positions

EA management:

The EA will manage the placement and deletion of pending orders as required. It will also manage the conversion of a TP into a TS, if this functionality is active.

Terminal management:

TP, SL and TS are managed by the terminal normally, once they are placed.