<h1 style="text-align:center">Simple Moving Average changing direction trade</h1>

The strategy consists of trading based on moving average. In simple words it will sell if moving average is down and buy if it goes up with a specific condition and stoploss.

**INPUTS:**

LOT : how many lots I will buy or sell

STOPLOSS: Conditional value (check box)

STOPLOSS VALUE: Stoploss price value.

MA: Custom Moving Average length value (Simple Moving Average)

DISTANCE: A value in pips

CANDLEPOSITION: Integer value

BALANCE: Value used for security

1) **The first step is to create the moving average.**

**a)Description**

It is **IMPORTANT** to know that the Moving Average will be the Simple Moving Average and that it should be based on **CLOSE CANDLE PRICES**. I should be able to modify its length. The EA should be able to identify if the current moving average closing candle number is going down or up:

     IF  Moving average close price < Moving average previous close price

     THEN its down and paint it red

     ELSE    Its up, then paint it green
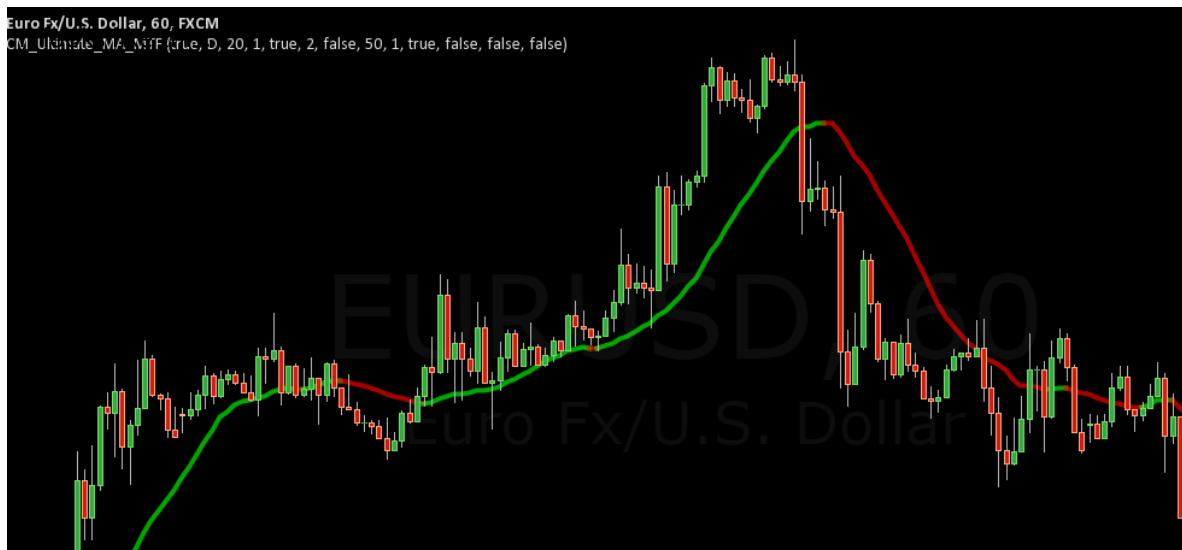
**2) The second step is the trading automatization**

**Entering position based on 2 conditions:**

a) **It will trade if it changes direction and trade on the POSITIONCANDLE candle.**
- If MA is positive and it changes to negative then SELL LOT on the candle position number POSITIONCANDLE.
- If MA is negative and it changes to positive then BUY LOT on the candle position number POSITIONCANDLE.

Example: If POSITIONCANDLE = 1, then it will enter position right away when it changes direction. If POSITIONCANDLE = 4, then when it changes direction it will enter position on the 4$^{th}$ candle(on the close price).

**IMPORTANT:** If POSITIONCANDLE is set to a number value where it didn't even reach, then DO NOT TRADE. For example: If Moving Average changed direction and POSITIONCANDLE = 4, but it changed of direction again after 2 candles, not giving the chance to reach 4 candles, then DO NOT TRADE in that specific occurrence.

b) **Also, it will only enter position if the following condition is met:**
- If the difference from Moving Average Value and Candle closing price is LESS than the DISTANCE value provided in the input. In other words, I want to prevent enormous gaps from MA and the real candle close price.

**For the stop loss I want 2 conditions:**

- I want the STOPLOSS input to be optional, if it's activated, then set the STOPLOSS VALUE as that.
- If STOPLOSS is not activated, then it will close when it changes direction
    Example: If it was negative and changed to positive and a BUY position was entered, then it will stop when it changes to negative again.

As a consequence, if STOPLOSS is not activated, the closing price of one position will be a new open position for another. This is because it changes direction and that will cause one to close and another to open. So, when a trade is closed, there should be another open. There is always a position open if all trading conditions are met.

**And one final condition:**

- Stop trading if Balance is equal or less than BALANCE input.

**I want this to be able to be back-tested on MetaTrader as the purpose of this EA is also for testing objectives and show graphically when the position was entered and closed along with the Moving Average requested above.**

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