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# Instruction (Manual) Document

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## 2. Information for the submitted materials

Title of the submitted instruction or manual	How to use Auto Investment Manager
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## 3. If it is about any trading platform or any of our products (leave empty if you don't use)

Name of Trading Platform	MetaTrader4 and 5
Trading Platform version	MT4 840 and MT5 1150
Name of Product	Auto Investment Manager (AIM)
Product version	12.0

## How to use Auto Investment Manager

Auto Investment Manager uses Meta Trader platform for its trading operation. Auto Investment Manager can operate on many time frames (i.e. H1, H4 and D1) and it can be applied to any currency pairs and any commodities including Gold, silver and oils. Optimization may be performed once in few months. When you optimize, use at least the latest 1 year data but more is preferred usually. Optimization will take half an hour to several hours depending on the speed of your computer. Note that good parameter setting is equal to higher profit. Therefore, you need a particular care for obtaining good parameter settings.

### EA Parameters

There are 7 main trading parameters. User will need to optimize mainly these parameters. Setting parameters is quite simple with Auto Investment Manager. Below I describe main trading parameters and their search range.

#### 1) Main Trading Parameters

- Smoothing Factor Alpha: 1.0 to 1.6 in step of 0.1 (You can even fix Alpha to 1.6 if you want to reduce computation time.)
- Trend Type: true or false only
- Maximum Position numbers: 3 to 8 in step of 1
- Deviation between position in pips (effective only if Max Position Number > 0): 20 to 60 pips but you can go more if you want.
- Take profit in pip: 20 to 60 pips but you can go more if you want.
- Trade Method: 0 to 6 in step of 1 (0 = Buy Carry trade, 1 = Sell Carry Trade, 2 to 6 is an trend trading mode with different methodology. You will either choose 0 to 1 or 2 to 6 for optimization. Don't optimize from 0 to 6. It is waste of time.)
- Analysis Depth: 10 to 200 (Not effective for Trade Method 0 or 1, therefore, do not optimize Analysis Depth if Trade Method = 0 or 1.)

#### 2) Other Parameters

- Trade Direction: 0 to 3 (0 = buy only mode, 1 = sell only mode, 2 = buy and sell mode, 3 = automatic.)
- Revise lot size in growth % (default = 0.5 or 50%): 0.5 (50%) means that EA will increase lot size if your balance increase 50%. If they are 1.2 (120%), then EA will increase lot size if your balance increases 120%
- LotSizePer10k: Lot size for your 10000 US dollar balance (for US dollar account). For example, setting it to 0.1 means that AIM is allowed to open 0.1 lot size for your 10000 US dollar balance.
- Equity Stop Loss, % (not effective if EquityStopLoss = 0.0): Auto Investment Manager has only Equity Stop Loss. 0.1 (10%) means that the EA will close all open position if the EA experience drawn down of 10%. If setting it to 0.0, the EA will operate without equity stop loss.
- Smart Trail Stop: Always switch off Smart Trail Stop for optimization by setting to false. Smart Trail Stop is the feature designed for more live trading tick by tick movement. As most of backtesting algorithm uses simulated tick, it is meaningless to optimize Smart Trail Stop on strategy tester. After optimization is completed for main trading parameters, switch on this smart Trail Stop feature and see if this feature improves the performance of AIM on the chosen setting. Note that Smart Trail Stop must be tested on every tick mode. If you test the Smart Trail Stop on open price mode, you won't get accurate results as you need continuous tick data to test this Smart Trail Stop feature
- Trail Stop Loss Distance: 1 to 10 (1 = default)
- Trail Step: 1 to 10 (1 = default)
- Stealth Buffer in pips: This feature hide your take profit from your brokers. You will specify the buffers in pips. 20 to 100 or more if you want.

Important note: When you apply Auto Investment Manager to Commodity Market including Gold, Silver, etc, you may have to change the range of Deviation between positions and Take profit in points parameters. Lot Fraction may differ too. This is because the contract specification for commodity Market is little different from other currency markets. Also their varying volatility is another important factor for change in this parameters.

## Mode of Optimization

Carry Trade mode is for fundamental traders. AIM can lend its power to fundamental traders too. However, note that carry trading mode is not suitable for everyone. For average traders, we recommend to use Trend Trading Mode. Below is some example, Carry Trading Mode configuration but not limited to this setting only. Plus when you do optimization on Carry Trading Mode, you must have some anticipation of future trend direction based on many economic factors.

### 1) Carry Trading Mode Configuration Example

- Smoothing Factor Alpha: 1.0 to 1.6 in step of 0.2
- Maximum Position number to open: 3 to 8 in step of 1
- Deviation between positions in pips (effective only if Max Position Number > 0): 20 to 60 pips in step of 5 pips
- Take profit in pips: 20 to 60 pips in step of 5 pips
- Type of Indicator: 0 to 1 in step of 1 (0 = buy carry trading mode, 1 = sell carry trading mode)

## 2) Trend Trading Mode Configuration

You can fix Smoothing Factor Alpha to 1.6 or varying depending on the computation time of optimization. Some example optimization configuration for Trend Trading Mode are shown below. But not limited to this setting only.

- Trend Type: true or false only
- Maximum Position number: 3 to 4 in step of 1
- Deviation between positions (effective only if Max Position Number > 0): 20 to 60 pips in step of 5 pips
- Take profit in pip: 20 to 60 pips in step of 5 pips
- Trade Method: 2 to 6 in step of 1 (Do not put any number over 6. 6 is the last option of Trend Trading Mode.)
- Analysis Depth: 10 to 200 in step of 5 or 10 (Step should be chosen depending on computation time for optimization.)

## TradeDirection and Carry Mode Trading Note

- TradeDirection = 0, EA is only allowed to open Buy Trades.
- TradeDirection = 1, EA is only allowed to open Sell Trades.
- TradeDirection = 2, EA is only allowed to open both buy and sell trades.
- TradeDirection = 3, EA will choose automatically one direction to trade.

For your information, Type of Indicator 0 = Buy Carry mode and Type of Indicator 1 = Sell Carry mode. Therefore, if you set TradeDirection = 1 (Sell Allowed) and Type of Indicator = 0 (Buy Carry), then EA won't open any position as EA can only allowed to open Sell trades. Therefore, if you set TradeDirection = 0 (Buy allowed) and Type of Indicator = 1 (Sell Carry), then EA won't open any position as EA can only allowed to open Buy trades.

## Smart Trail Stop

Smart Trail Stop basically hide your take profit and stop loss (when target is hit) from your brokers. One might call this as Stealth mode. What is even more important is that Smart Trail Stop will give you the opportunity to catch more profits than just simple take profit. Note that both MT5 and MT4 version have Smart Trail Stop feature added. However MT5 add any new order to existing position and every time you will get only one position floating for one currency pairs. This is not like new order is opened as a separate order in MT4. So naturally the trail stop on MT5 and MT4 version works slightly different manner. Both hides take profits and stop loss from brokers but the way trail stops between MT5 AIM and MT4 AIM is different. Smart Trail Stop must be tested on every tick mode and therefore they will not work on open price mode. When you optimize AIM for main trading parameters, please switch off this smart trail stop. After you have find good settings, then switch on the smart trail stop and see how they improve its performance in every tick mode. For MT4 smart trail stop, just default setting will work fine for most of currency pairs. So there is no need to further tuning for this smart Trail Stop for MT4 AIM. For MT5 AIM, you can further fine tuning than using default setting.

As the way this smart trail stop works for MT4 and MT5 version are different, smart trails stop setting between MT4 and MT5 are not compatible. Also it is important to note that with Smart Trail Stop on, AIM will monitor every tick arrival and try to close your trades in your favor according to the market condition. Therefore it is important that your internet connection between your computer and brokers must be running 24/5 days. Probably explanation here is too wordy. But at the end of day all you have to know is when to switch on and off this smart trail stop. It is simply one or two mouse clicks.

Auto Investment Manager MT4 EA\_v11.7

Testing Inputs Optimization

Variable	Value	Start	Step	Stop
===== EA Parameters to optimize (Main Trading Parameters) =====				
<input type="checkbox"/> Trend Type: true or false only	true	false	true	
<input type="checkbox"/> Trade Method: 0 to 6 in step of 1 (0 to 1 or 2 to 6)	5	5	0	0
<input type="checkbox"/> Analysis Depth: 10 to 200	40	40	0	0
<input type="checkbox"/> Smoothing Factor Alpha: 1.0 to 1.6 in step of 0.1 or 0.2	1.6	1.6	0.0	0.0
<input type="checkbox"/> Maximum Position number to open: 3 to 5 in step of 1	3.0	3.0	0.0	0.0
<input type="checkbox"/> Deviation b/w position in pip: effective if MaxPositionNumber >	27.0	27.0	0.0	0.0
<input type="checkbox"/> Take profit in pip: (20 to 60 in step of 5)	45.0	45.0	0.0	0.0
===== EA Parameters to choose =====				
<input type="checkbox"/> TradeDirection 0 to 3: 0 = Buy, 1 = Sell, 2 = Buy and Sell, 3 =	0	0	0	0
<input type="checkbox"/> Lot Size per 10k balance: 0.2 means 0.2 lot per 10000 us dollar	0.2	0.2	0.0	0.0
<input type="checkbox"/> Equity Stop Loss (%): not effective if EquityStopLoss = 0.0;	0.0	0.0	0.0	0.0
<input type="checkbox"/> Profit Goal (%): not effective if Profit Goal = 0.0;	1.0	1.0	0.0	0.0
<input type="checkbox"/> Profit Goal Global Mode On/Off Switch	true	false	true	
<input type="checkbox"/> Profit Goal Restart: from scratch (true) or continue from prevo	true	false	true	
<input type="checkbox"/> Revise lot size in growth %: default = 0.5 (50%)	0.5	0.5	0.0	0.0
===== EA Parameters to choose (if UseFixedLot = false) =====				
<input type="checkbox"/> Use Fixed Lot: Set "true" will not enable advanced MM systems.	false	false	true	
<input type="checkbox"/> Fixed Lot: effective only if UseFixedLot is true	0.1	0.1	0.0	0.0
<input type="checkbox"/> Maximum Lot size EA can open:	50.0	50.0	0.0	0.0
<input type="checkbox"/> Order Comment: must be very short and change to your own.	TTT			
<input type="checkbox"/> Order Magic: use default if possible (4 digits only)	1177	1177	0	0
===== EA Parameters for Smart Trail Stop =====				
<input type="checkbox"/> Smart Trail Stop: Switch off for optimization by setting to fal	true	false	true	
<input type="checkbox"/> Trail Stop Loss Distance: from 1 to 15	1.0	1.0	0.0	0.0
<input type="checkbox"/> Trail Step: from 1 to 15	1.0	1.0	0.0	0.0
<input type="checkbox"/> Stealth Buffer in pip: 20 to 100 or more	50.0	50.0	0.0	0.0

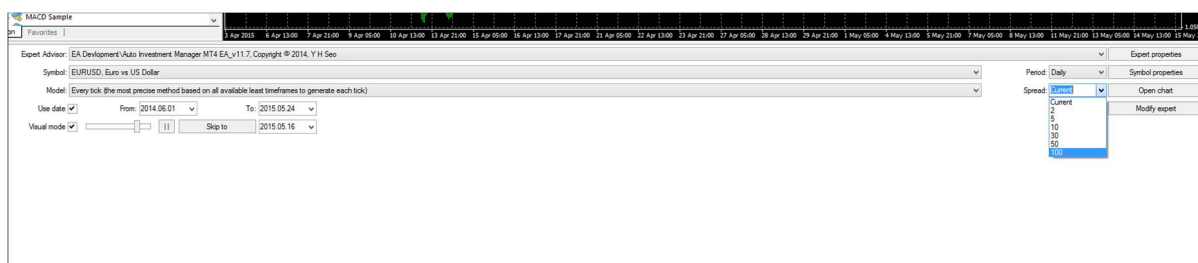
**Smart Trail Stop Parameters.**

Load Save

OK Cancel Reset

## Spread and Backtesting to avoid too optimistic results

It is well known that Broker's spread influence the operation of trading robots as well as your profits. In MT4 Strategy tester, you can actually control your spread while you are backtesting. Unfortunately, this feature is not available in MT5 Strategy tester yet. However MT5 strategy tester uses the largest spread of the candle bar and this is probably one of the reason why MT5 Strategy Tester does not have the ability to set custom spread yet. Anyway, it is recommended to use high spread in backtesting and optimization stage to avoid overly optimistic results for your setting. For example, it is common procedure to set spread of 10 pips in backtesting and optimization to find out the strong settings working for any hostile market condition. You will see many profitable setting for AIM even though you have increased your custom spread to 10 pips in your strategy tester. After that, you still have to carefully check your drawdown with that settings even the setting confidently pass through backtesting with the hostile spread in your strategy tester. The screenshot below shows how to choose the custom spread values in your MT4 strategy tester. Please click the picture below to see bigger picture.



## EA Magic Number

Magic number is very important for AIM operation. In default setting magic number is 4 digits. AIM will automatically add few more digits onto its magic number to produce unique magic number. So do not input magic number more than 4 digits. You can input magic number other than default one but they must be 4 digits only (i.e. 1234).

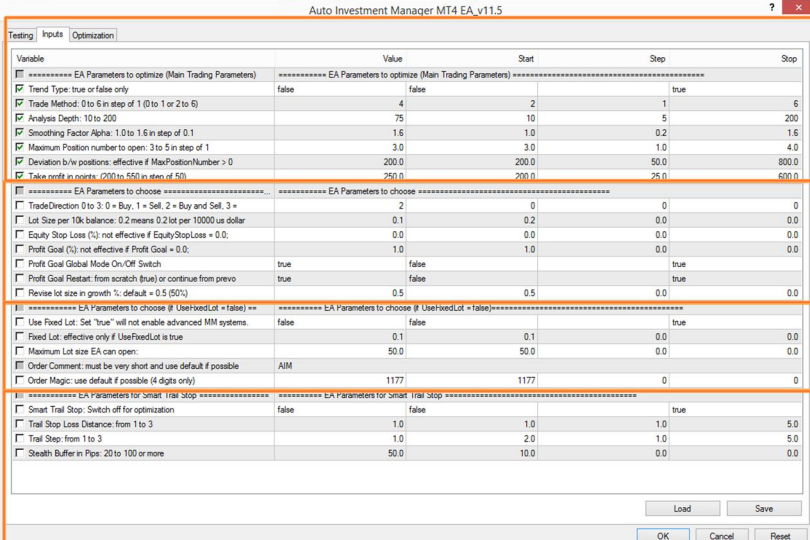


## Carry Trading VS Trend Trading Mode

Carry trading mode does not use any technical indicators. For example, if you set Type of Indicator = 0, then EA will assume that trend is very strong on buy side and EA will keep open Buy trades continuously. To use carry trading mode, you need to set AIM in the direction in which some fundamental analysis indicates. Such a directional prediction might be justified due to interest rate announcement by FED or surprising GDP data from China or you believe stock market bubble will burst soon, etc. To set parameters for carry trading mode, your historical data selection is important. For example, unlike your anticipation to bullish market view, current trend direction may be bearish and therefore, using the latest bearish historical data may not yield much meaningful setting for future bullish market. In such a case, you can use historical period with good bullish movement in your Meta Trader Strategy Tester. You can tune your parameter of AIM for this way. If you are not a fundamental trader or not a good fundamental traders, then you can use trend trading mode with our AIM. In Trend Trading Mode, EA uses our latest trend extraction method to decide market entry and exit for buy and sell such as Wavelet Cycle Extraction methods and other non linear dynamic algorithm.

## Further note on optimization

Configuration of AIM can take half an hour to several hours. Depending on how much time and efforts you want to put. You don't have to optimize all the main trading parameters in one go. If the computation is too heavy to do so, then you can fix some main trading parameters (i.e. SmoothingFactor) and you can perform optimization for other trading parameters. This is quite common work around to avoid too heavy computation among mathematician. When you select your parameter setting, of course, you need to focus on profits. However, you also need to watch out your drawdown carefully.



**These are Main Trading Parameters you may need to optimize. This screen shot provide some example configuration for Trend trading optimization. This is one example only and not limited. How you determine the search range, your optimization time can vary. So be smart.**

**These parameters are need to be selected manually using your own judgement. Never optimize any of these parameters together with main trading parameters. It will just add extra optimization time.**

**You may not need to touch these parameters. You may just use default settings. Maximum Lot size is the maximum lot size you can open with your broker.**

**Never optimize Smart Trail Stop parameters with main trading parameters. Only switch on Smart Trail Stop Parameters for demo or live trading. You can backtest these parameters if you know what you are doing. But if you do, then optimize separately from other trading parameters.**



Auto Investment Manager MT4 EA, v11.5

Variable	Value	Start	Step	Stop
===== EA Parameters to optimize (Main Trading Parameters) =====				
Trend Type: true or false only	true	false	true	
Trade Method: 0 to 5 in step of 1 (0 to 1 or 2 to 6)	0	0	1	5
Analysis Depth: 10 to 200	75	10	5	200
Smoothing Factor Alpha: 1.0 to 1.6 in step of 0.1	1.6	1.0	0.2	2.0
Maximum Position number to open: 3 to 5 in step of 1	3.0	3.0	1.0	8.0
Deviation b/w positions: effective if MaxPositionNumber > 0	200.0	200.0	50.0	800.0
Take profit in points: (200 to 550 in step of 50)	250.0	200.0	20.0	600.0
===== EA Parameters to choose =====				
TradeDirection 0 to 3: 0 = Buy, 1 = Sell, 2 = Buy and Sell, 3 =	0	0	0	0
Lot Size per 10k balance: 0.2 means 0.2 lot per 10000 us dollar	0.1	0.2	0.0	0.0
Equity Stop Loss (%): not effective if EquityStopLoss = 0.0;	0.0	0.0	0.0	0.0
Profit Goal (%): not effective if Profit Goal = 0.0;	1.0	1.0	0.0	0.0
Profit Goal Global Mode On/Off Switch	true	false	true	
Profit Goal Restart: from scratch (true) or continue from prev	true	false	true	
Revised lot size in growth %: default = 0.5 (50%)	0.5	0.5	0.0	0.0
===== EA Parameters to choose (if UseFixedLot = false) =====				
Use Fixed Lot: Set "true" will not enable advanced MM systems	false	false	true	
Fixed Lot: effective only if UseFixedLot is true	0.1	0.1	0.0	0.0
Maximum Lot size EA can open	50.0	50.0	0.0	0.0
Order Comment: must be very short and use default if possible	AIM	1177	0	0
Order Magic: use default if possible (4 digits only)		1177	0	0
===== EA Parameters for Smart Trail Stop =====				
Smart Trail Stop: Switch off for optimization	true	false	true	
Trail Stop Less Distance: from 1 to 3	1.0	1.0	1.0	5.0
Trail Stop: from 1 to 3	1.0	2.0	1.0	
Slippage Buffer in Pips: 20 to 100 or more	50.0	10.0	0.0	0.0

Load Save OK Cancel Reset

For buy Carry Trading Mode, set Trade Method = 0. Do not optimize Trend Type and Analysis Depth for carry trading. Carry trading mode does not use Trend Type and Analysis Depth parameters. Also set Trend Type = true. For Sell Carry Trading Mode, you just need to set Trade Method = 1.

You may increase search range for Maximum Position Deviation for carry trading. It is simply because carry trading mode optimization need a lot less computation time.

Also set Trade Direction = 0 for buy carry trading. For sell carry trading, set Trade Direction = 1.

Again switch off Smart Trail Stop by setting it to false when you optimize main trading parameters. Only switch them on for your demo or live trading.

## Running AIM on Live Trading.

AIM is really powerful tool to grow your money whether it is small or big capital. Therefore, right usage of AIM is very important. Never rush putting AIM on live trading without fully understanding its functionality. Firstly, we recommend users to play around with AIM with Meta Trader strategy tester for sufficient time. Once you are comfortable with AIM, then you can probably start to use AIM on demo account at least 1 week to get feel of what it is like running on live trading. Also it is very important to determine good profit and risk goals for yourself. Individual traders have very different psychology and their preferred profit goal is of course very different. Managing AIM on live trading requires good organizing skills if you run them on multiple currency pairs. For example, you may have to open many charts on your Meta Trader terminals and you have to attach five or six AIM with different settings. Therefore it is always very convenient to use set file. Please, get habit of saving set file and loading set file after optimization and before live or demo trading. Another caution for the user of AIM is that while you are running AIM on your live account, do not optimize or test your AIM on Meta Trader strategy tester. In another words, always separate your live account Meta Trader terminal from your research Meta Trader terminal.

## Do lists for AIM user

- Must put AIM more than 2 weeks on demo account.
- Always put AIM on multiple currency pairs to reduce risk
- Always separate your live account Meta Trader terminal from your research Meta Trader terminals (Don't disturb your live trading Meta Trader terminal if possible. It is better to have a dedicated computer to run AIM.).
- Use set file always instead of entering parameters manually on AIM to efficiently manage AIM setting for many currency pairs.
- Use daily time frame if you are starter in auto trading with AIM
- Must determine your preferred profit goal before running AIM on live account (try couple of big and small LotSizePer10K variable to find drawdown and profit level of AIM for that currency pairs. Don't be too unrealistic about your profit target, especially when you are just starter in financial trading.).