



User Manual v1.0

Important Disclaimer: High Risk Warning!!

Please Read Carefully

This Expert Advisor uses strategies that carries a high level of risk, and may not be suitable for everybody. Before deciding to use this Expert Advisor you should carefully consider your trading objectives, level of experience, and risk appetite. The possibility exists that you could sustain a loss of some or all of your initial trading capital and therefore you should not deposit money that you cannot afford to lose. High risk can lead to high returns, but by using this Expert Advisor you accept the risk and in you are the only one responsible for your losses. This manual is not a financial advise. In any case of doubt consult a Financial Advisor.

Welcome and congratulations for having choose this great EA as your trading tool to profit from the Forex Market. Hendrix Turbo Grid is the result of many years of real traders' feedback and suggestions about grid systems. This is the first time that something like that is offering to retail traders.

Reading this manual you will understand the potential and the flexibility of Hendrix Turbo Grid which is very adaptable to any risk attitude. This manual will explain all of its features with practical examples and images so you can have control over your trading activities.

Index

Requirements.....	5
About Broker.....	5
About Virtual Private Server.....	5
Trading Target.....	6
Note for Leverage and European resident.....	6
Note for US traders.....	6
Informative Panel.....	7
Parameters Overview.....	8
General.....	8
Emergency Management.....	8
Entry.....	9
Trend/Noise Filter.....	10
Main Trend Filter.....	10
Dynamic Exit.....	10
Auto Compound.....	11
Target Management.....	11
Time Filter.....	12
How the EA works.....	13
Entries.....	13
Exits.....	16
Intelligent Lot Weight.....	18
Auto Compound.....	20
Time Filter.....	21
Emergency Management.....	21
Account Size and Money.....	23
Backtest and Optimization.....	24
Sensible ranges and steps.....	24
Contact.....	26

Requirements

Let's start from the beginning. What do you need to properly run this EA ?

About Broker

The most important requirement is a good broker. I tested many brokers in the past years and decided to stay with RoboForex(<http://bit.ly/2v7gv3b>) for multiple reasons:

- Reliable and solid Broker
- Great executions
- Custom Service is promptly
- Never had a single issue withdrawing my profits
- No Leverage Cap for European Client
- Great offer of CryptoCurrencies on MT4

Also the ticks are slightly different from broker to broker and when I had to choose I decided to tweak Hendrix Turbo Grid on it, so this is the broker the EA was designed for. You can use other brokers of course but with this one **you will get the most safest and reliable result.**

I suggest you to open the MT4 Pro-Standard Account (<http://bit.ly/2JJ383n>) and if you need more funds or want to make the EA more reliable against draw downs use this promotion which I carefully selected for Grid Systems (<http://bit.ly/2WnMgk4>). I will explain this further on another chapter of this manual(**Account Size and Money**).

About Virtual Private Server

As second, you should know that this EA is made to run 24/7, so you can keep it running on your computer(with a good internet connection) or you can rent a remote VPS that will run this EA for you. I highly suggest you to go with this option as it will guarantee a more stable environment for the EA, reliable internet connection and low latency, which is very important.

You will realize pretty soon that a good VPS is one of the most important tool for a trader, so if you are serious about this and want the Best VPS service especially designed for EAs with already pre-installed MT4, you can get it for a cheap price here <http://bit.ly/2v72nHa>

They also offer "30 Days Money Back Guarantee" if you are in doubt and 99.99% uptime. Of course you can use this VPS for other EAs as well or to run Hendrix Turbo Grid on multiple pairs.

Trading Target

The EA's default settings are chosen for the following characteristics and if you are a beginner you should stick to them:

Approach: 1 pair trading
Target Pair: EURUSD
Time Frame: 5 Minutes
Market condition: Ranging
Account Balance: 2000\$+
Minimum Leverage: 1:100+

Of course these are the ideal conditions the EA was designed for, but we will see in this manual how to overcome many of these, including how to use it with lower account balance and on other Time Frames and Pairs.


Note for Leverage and European resident

Since August 2018 the European Securities and Markets Authority(ESMA) restricts the maximum leverage brokers can offer to European retail traders to 1:30(on forex, other instruments have even lower leverage). This is of course unusable for most EAs, especially for GRID and Martingale systems. So, if you are an European resident and retail trader the only ways you have to avoid this leverage cap is to use a broker who is not under ESMA influence or do the procedure to being recognized as a professional trader. I suggest you the first because it is easier and trouble free. So do not open your account with random brokers around the world and risk to get scammed, here (<http://bit.ly/2JJ383n>) you can find a very reliable one who offers all the leverage you need for your systems.

Note for US traders

If you are an US resident and your broker put in action some limitations, you can still use the EA setting the "Allow Hedging" parameter to false. In order for this to work you can't open other positions on the same pair of that account. The EA will open only a set of buys or sells trades, but will avoid opening both at the same time. The FIFO rule is already set correctly. If you get any difficulties, contact me.

Informative Panel



Broker:	RoboForex Ltd
Account:	2456616
Leverage:	1:500
Balance:	1245.90
Equity:	1247.81
Starting Lot:	0.01
Open trades:	0/0
Profit/Loss:	0.00
Free margin:	1239.19

The informative panel show the basic information about your account and current trading situation. Most of labels are self-explanatory but for completeness I will still explain them.

Broker: name of the broker you are currently connected to

Account: account number you are connected

Leverage: your account leverage

Balance: balance of the account

Equity: current equity of the account

Starting Lot: the amount of lots the sequence will be started with

Open trades: the number of currently open trades managed by the EA, in the form of BUY/SELL

Profit/Loss: the sum of all profit and loss of all trades managed by the EA

Free margin: current free margin

Parameters Overview

General

Show Panel(true/false)

Show or hide informative panel. The use case for hide it is to speed up optimization in the tester.

Enable Buy(true/false)

Allow buy trades

Enable Sell(true/false)

Allow sell trades

Enable Hedging(true/false)

Allow the EA to start another long trade sequence during short sequence and short trade sequence during long sequence. If you don't have a good reason to avoid this, I suggest to let this enabled as it increases profit and lowers draw-down.

Max Trades(1...+)

The number of maximum opened trades at the same time by the EA(considering the pair the EA is attached to and using the same magic number)

Magic Number(1...+)

The EA would label the trades with this magic number. Will manage all the trades on the same pair with this magic number.

Emergency Management

Max Start Lot(0...+)

When set to 0 is disabled. The maximum size of the first trade's lot.

Close on equity loss(0...+)

When 0 the feature is disabled, otherwise set the maximum loss permitted by the EA. When reached the EA will close all positions and will actually take the loss.

Close In Profit after X hours(0...+)

When 0 the feature is disabled, otherwise set the number of hours after which the EA will close all sequence when in small profit(and will not wait to achieve the target

profit)

Close In profit after X trades(0...+)

When 0 the feature is disabled, otherwise set the number of open trades once reached the EA will close all sequence when in small profit(and will not wait to achieve the target profit)

Entry

Dimension Cross Period(10...+)

This is one of the main indicators to trigger the first trade. It considers geometrical fractal space fillings to discern the ranging/trending market condition. When the pair goes from ranging to trending, the EA checks the Direction Impulse algorithm to know in which direction to open the trade. The value is the number of the past candles involved in the calculation of the market condition shifts.

Direction Power Period(5...+)

The number of candles for the estimation of Bulls/Bears strength

Level Period(10...+)

The number of candles for the estimation of average strength of the Bulls/Bears

Min Distance Pips(50...+)

The value is in points, so 50 means 5pips. The entries of the trades subsequent of first are triggered by an internal indicators but they need to be more distant than the specified value. So this parameter has 2 different purposes:

1 - Set the minimal price distance between trades. The next trade of the sequence will be opened if the indicators agree and the price is far more than the specified value from the last trade.

2 - Calculate the lot value of the next trade. If the "Min Distance Pips" is set to 100(10 pips) and the indicators trigger a new entry only when the price is 350(35 pips) distant, then the lot of the new trade will be 3 times bigger. That's because of $35/10=3.5$.

This algorithm decides in which direction the market is going to move when the "Dimension Cross" algorithm shows there is a shift from ranging to trending. Also it servers for subsequent trades to not be opened when there is a strong movement of price in the opposite direction of sequence.

Trend/Noise Filter

Maximum Ratio(50...90)

When the Trend/Noise is above this value the signal is ignored as it means the trend is too strong.

Candle to Consider(10...+)

The number of candles to estimate the local noise.

Candles for Average Trend(4...+)

The number of candles for trend normalization

Candles for Average Noise(50...+)

The number of candles for noise normalization

Since we are searching for ranging market condition, this is a filter for the first entry. It sees the price movement like Trend/Noise ratio and it tries to avoid clear local trends.

Main Trend Filter

Enable Main Trend Filter(true/false)

Enable or Disable the trend filter for the first trade

Slope Sharpness(0...15)

The minimum slope of the trend channel express in points. 0 means the channel need to point upward for buy and downward for sell with no minimal slope requirements.

Channel Period(50...+)

The number of the candles to estimate the trend regression(direction)

This algorithm is meant to filter out all the trades that don't agree with the bigger trend direction. It is off by default because it lowers the numbers of the trades and the profitability of the whole system

Dynamic Exit

Candles for Potential Move(50...+)

The number of the candle to estimate the price channel

Potential Move Std(0.5 ... 2.0)

The exit point of the whole sequence(if minimal profit target is already reached), calculating the standard deviation from the price channel.

This is the algorithm that decides when to close the sequence and it will greatly affect the gains of the whole system

Auto Compound**Enable Auto Increment Lot**(true/false)

If set to true, will automatically adjust the lot as the account increases using "Auto Lot Currency Step"

Auto Lot Currency Step(1000...+)

When "Auto Increment Lot" set to true, it will increase the base lot size every set value. For example in case of 3000(that means 3000\$ for the dollar account) it will increase the lot size for every 3000\$ of balance.

Target Management**Lot Base**(0.01 ... +)

The Lot the sequence will start with.

Lot Sum(0.01 ... +)

The amount of lot to be added for every new trade of the sequence.

Minimal Profit Target(0.5 ... +)

The profit target in currency for the sequence of 1 trade. Every other trade opened will increase the target profit.

Increase Profit Target(1.0 ... +)

This is the coefficient the profit target will be multiplied for for every new trade in the sequence.

This section set the money management behavior and the target profit for the sequences.

Time Filter

Enable Time Filter(true/false)

Enable the filter for the first trade: it will be triggered only within this time range.

Start Hour(0...24)

Start of time range

Stop Hour(1...24)

End of time range

How the EA works

Entries

The EA opens a trade and then wait to reach the target profit. If the price goes against the first trade the EA starts to open other trades(with carefully balanced lots) waiting for a little correction in order to close the whole trade sequence in profit.

The First Trade is triggered by internal algorithm in 3+1 optional phases:

1) At first the Fractal Geometrical Space identifies the shift from ranging to trending market.

Involved parameters:

Dimension Cross Period(10...+)

2) Then the Direction Impulse algorithm identifies the direction of the movement

Involved parameters:

Direction Power Period(5...+)

Level Period(10...+)

3) After that the Noise/Trend filter is checked to ensure the local trend(spike) is not too strong

Involved parameters:

Maximum Ratio(50...90)

Candle to Consider(10...+)

Candles for Average Trend(4...+)

Candles for Average Noise(50...+)

4) (Optional) check whether the chosen direction agree with the main bigger trend

Involved parameters:

Enable Main Trend Filter(true/false)

Slope Sharpness(0...15)

Channel Period(50...+)

What we are searching for is a weak trending direction. We try to open the trade in the direction of small trend in order to maximize our chances, but we want to avoid strong spikes at all costs because they tend to reverse sharply. Weak reversion is well managed by the EA opening new trades and waiting for a proper moment to close the whole sequence in profit.

The Subsequent Trades are triggered in 2 phases:

1) Check whether the price went against the previous open trade more than "Min Distance Pips" at the closing bars.

Involved parameters:

Min Distance Pips(50...+)

2) The Direction Impulse algorithm is checked to ensure we are not in a strong opposite trend

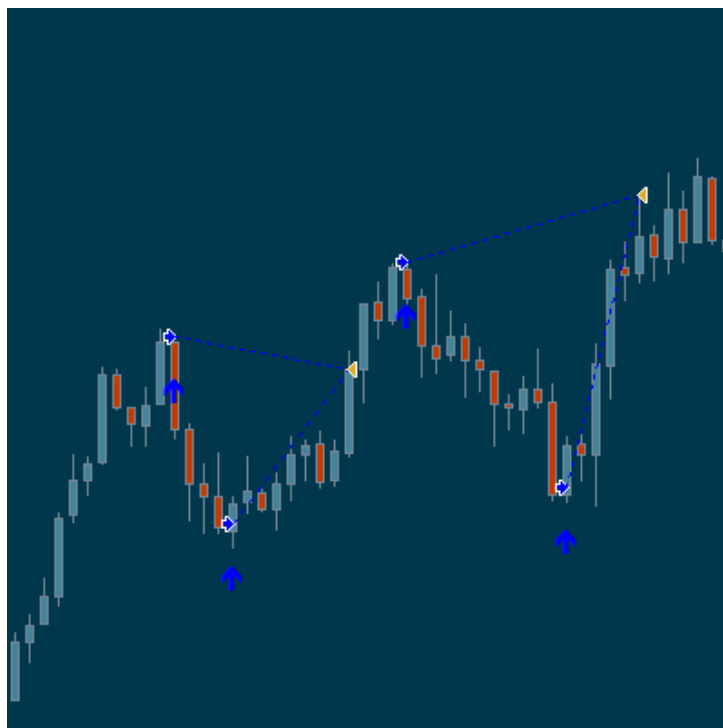
Involved parameters:

Direction Power Period(5...+)

Level Period(10...+)

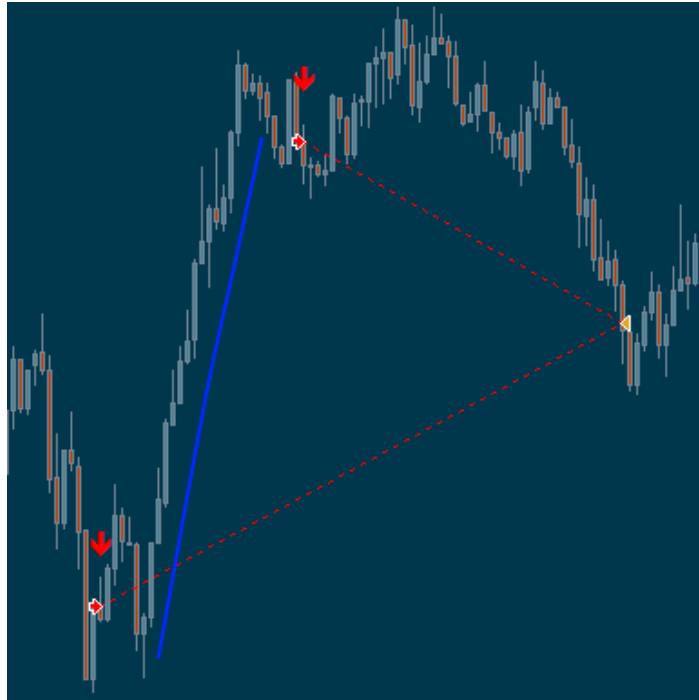
Since the 2nd condition can prevent the opening of new trades for many time, the distance between trades can be a lot more than "Min Distance Pips". This is because we don't want to open a new trade in a strong opposite trend.

Example 1



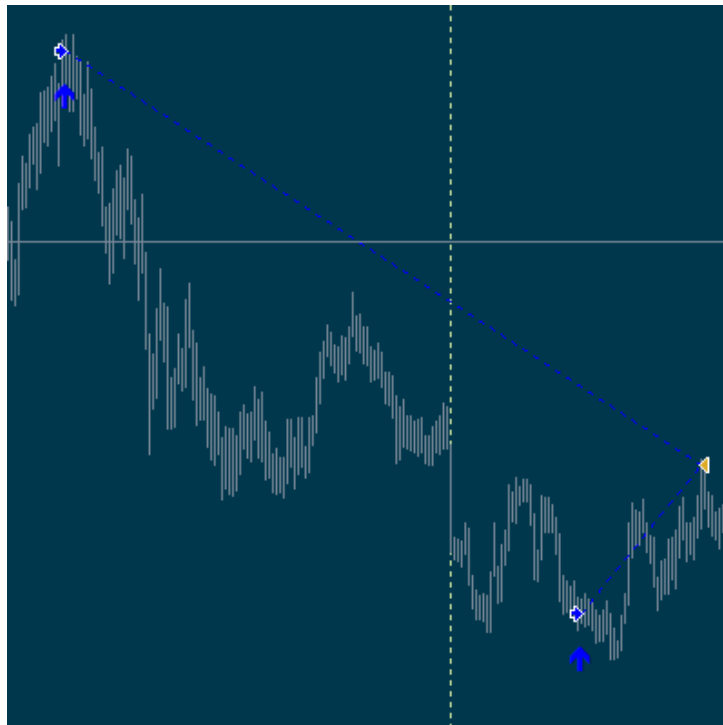
Two sequences with classical entry. The Subsequent Trades are far approximately 25pips(Min Distance Pips) from its First Trade.

Example 2



The Subsequent Trade is farer than 25pips(Min Distance Pips) from the First Trade. This is because the EA identifies correctly a strong opposite trend and avoids to open new trades in the middle of it.

Example 3



Another Subsequent Trade a way farer than 25pips(Min Distance Pips) from the First Trade. The EA at first identifies a strong down trend and avoid the opening of new trades in the

middle. After that it also avoided the choppy hours for the pair.

Exits

The EA manages the opened trades of the same type as a whole and not individually, so when we speak about profit, we speak about the profit of the whole sequence.

The estimation of the exit point is done in 2 phases:

1) Calculation of the minimal currency profit for the current sequence. That is strictly related to currently opened trade numbers. The complete formula for this is:

Final Profit = Minimal Profit Target * (Increase Profit Target ^ (Number Of Opened Trades -1))

This can look like an over complicated formula but it isn't. We can see it with a practical example.

When there is only the First Trade opened, the minimal target profit is the one set in "Minimal Profit Target" parameter. Then for every other Subsequent Trades the minimal target profit is multiplied by "Increase Profit Target" parameter.

For example, if we have "Minimal Profit Target"=2.0 and "Increase Profit Target"=1.5, the actual minimal profit target will grow this way as the number of trades increase:

Number of Trades	Current Minimal Profit Target
1	2 \$
2	3 \$
3	4,5 \$
4	6,75 \$
5	10,13 \$

Basically for every new trade the Current Profit Target is multiplied by "Increase Profit Target" which is 1.5 in our example.

Involved parameters:

Minimal Profit Target (0.5 ... +)

Increase Profit Target(1.0 ... +)

2) Checking whether the price reached the standard deviation of the statistically potential

move

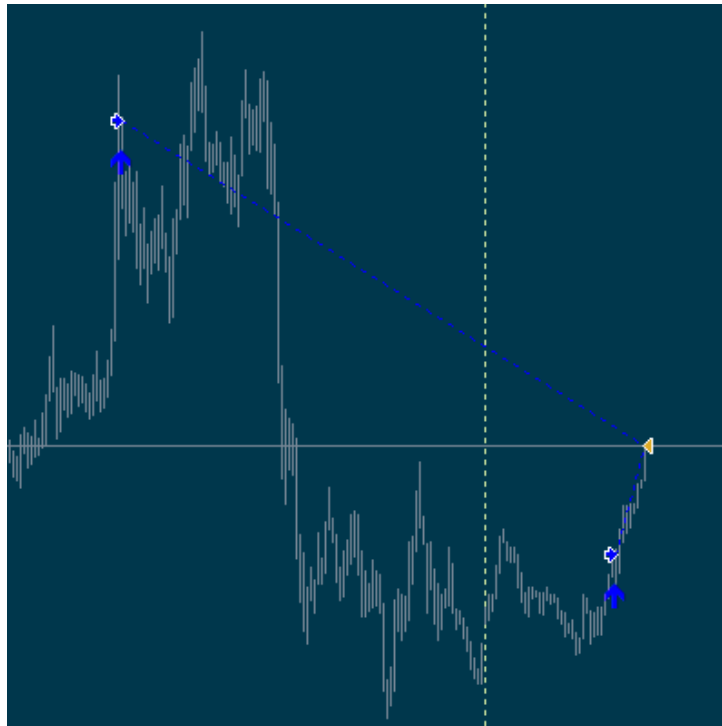
The idea behind this approach is to ensure minimum currency profit for the sequence and let the profit run a little more if the price did not reach its statistically full potential move.

Involved parameters:

Candles for Potential Move(50...+)

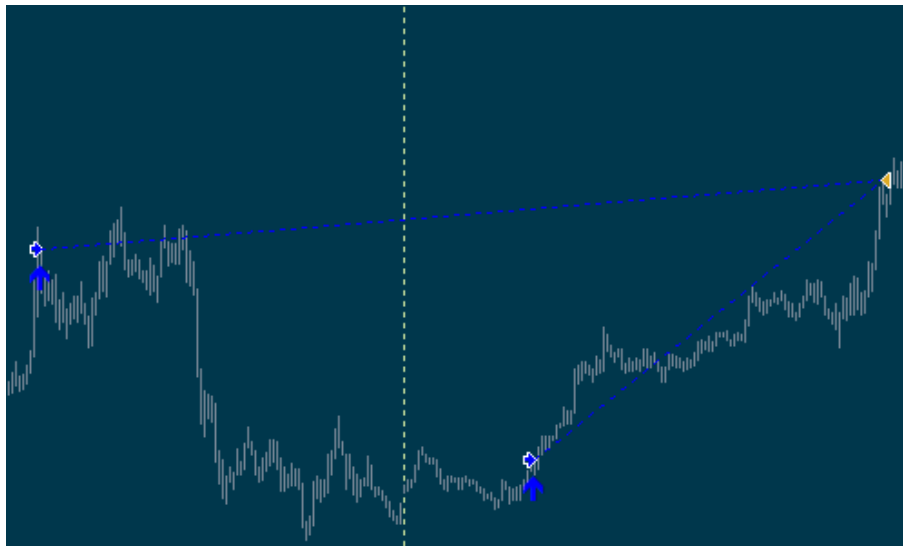
Potential Move Std(0.5 ... 2.0)

Example 1



The sequence closed in profit using "Candles for Potential Move"=50 and "Potential Move Std"=1.0. Was slightly bigger than Current Minimal Target Profit.

Example 2



This is the same sequence as previous example but using "Candles for Potential Move"=200 and "Potential Move Std"=2.0. These are very high values but they were set for example purpose. The sequence profit was so much bigger than the Current Minimal Profit.

The "Candles for Potential Move" and "Potential Move Std" parameters are a great feature to increase profitability but they still bring more risks and should be used carefully and well tested in combination with other parameters.

Intelligent Lot Weight

This feature is very important for the effectiveness of the EA. We already have seen how it smartly avoids opening new trades in presence of strong trend against our direction, but what makes the EA really effective is the Intelligent Lot Weight algorithm.

Involved Parameters:

Min Distance Pips(50...+)

Lot Base(0.01 ... +)

Lot Sum(0.01 ... +)

Let's analyze a typical situation where this feature will make a huge difference.



The image shows the sequence of 2 trades successfully closed in profit using these specific parameters:

Min Distance Pips = 250
Lot Base = 0.01
Lot Sum = 0.01

With the classical Grid approach, the EA would open a new trade every 25 pips increasing the lot size with a specific lot amount. The sequence in that case would be 0.01 0.02 0.03 0.04 ... every 25 pips.

Hendrix Turbo Grid has better and innovative way to setup grid orders as you can see in the image above. After the EA opened a SELL First Trade a strong BUY trend started and the EA cleverly avoided to open any other trades in the middle of it. The price already moved 93 pips when the EA decided to open another SELL trade. Since the "Min Distance Pips" was set to 25 pips the EA opened the second trade with 0.04 lot instead of 0.02. Basically the EA should open a new trade every 25 pips but since bad market conditions prevented it doing so, it has opened the Subsequent Trade with bigger amount of lots based on price distance.

In this example the price moved 93 pips, so $93/25 = 3.75$ (rounded to 3), so the sequence is 0.01 (0.02) (0.03) 0.04. The 0.02 and 0.03 are skipped due to bad market condition and

the EA opens the second trade directly with 0.04 lots. That way we have a better entry price for the whole sequence, can monetize more and we are lowering the risk.

Auto Compound

This feature let the EA to increase the lots and targets as the balance grows for testing and user convenience. The easiest way to understand it is with a table comparison.

Involved Parameters:

Enable Auto Increment Lot(true/false)

Auto Lot Currency Step(1000...+)

Lot Base(0.01 ... +)

Lot Sum(0.01 ... +)

Minimal Profit Target(0.5 ... +)

When enabled, the Auto Compound feature uses "Auto Lot Currency Step" to change the actual value of "Lot Base", "Lot Sum" and "Minimal Profit Target".

Let's analyze these examples based on balance and auto compound feature:

"Enable Auto Increment Lot"=false

	Value Set	Current Value
Lot Base	0,01	0,01
Lot Sum	0,01	0,01
Minimal Profit Target	1,5	1,5

"Enable Auto Increment Lot"=true, "Auto Lot Currency Step"=1000, Balance=2500

	Value Set	Current Value
Lot Base	0,01	0,02
Lot Sum	0,01	0,02
Minimal Profit Target	1,5	3

"Enable Auto Increment Lot"=true, "Auto Lot Currency Step"=1000, Balance=3000

	Value Set	Current Value
Lot Base	0,01	0,03
Lot Sum	0,01	0,03
Minimal Profit Target	1,5	4,5

Basically when the "Enable Auto Increment Lot" is set to true, the EA will calculate automatically the right current value for "Lot Base", "Lot Sum" and "Minimal Profit Target" based on value of "Auto Lot Currency Step" and the current account balance. As it is shown in example table 3, if the balance of the account is 3000 \$ and I have "Auto Lot Currency Step" set to 1000, that means the values of these target parameters will multiplied by 3 ($3000 / 1000 = 3$), when the balance will reach 4000 \$ the these target parameters will be multiplied by 4 and so on...

Time Filter

This is a time filter that prevents opening of any kind of trade outside the allowed hours. It is carefully set to avoid choppy market conditions for EURUSD on GMT +2 server time broker (winter time). If you want to optimize the EA for other pairs you should take into consideration the time of choppy movements for that specific pair.

Involved Parameters:

Enable Time Filter(true/false)
Start Hour(0...24)
Stop Hour(1...24)

Emergency Management

This section is meant to keep under control situations when things start to go wrong.

You have the possibility to set a stop loss based on sum of currency loss of the all trades managed by the EA. You have to remember that this is a GRID system and the stop loss is not really suggested, but you still have a freedom to set it up to see how it will behave in tester or in live with some particular parameters combination. I highly suggest to keep it disabled if you are a beginner or you don't understand what are you doing. Manual intervention is a way better.

When the sequence takes too much time or starts too much trades, the EA will automatically close the sequence when slightly in profit, no matter what the profit target was. This feature is very important and allow to close a bad sequence when we have a chance instead of waiting for something bad.

Involved Parameters:

- Close on equity loss(0...+)

- Close In Profit after X hours(0...+)

- Close In profit after X trades(0...+)

Account Size and Money

Most of my profitable customers have account size between 10000\$ and 20000\$. This is, of course, a good start for a GRID system. But all depends on how much you want to make per month, keep things realistic and avoid to trespassing into pure gambling is the key for the success.

Due to nature of grid systems we need enough capital in the account to cover temporary draw downs. This is very important to keep in mind and I would personally suggest to run this EA with not less than 3000\$.

If you don't have enough capital or you want to increase even more the safeness of your trading, you can use this special offer (<http://bit.ly/2WnMgk4>) that I have specifically selected for Grid and Martingale systems. The broker will give you 50% more capital over your deposit, and that money can be used during drawdowns and bad situations. This is what you actually want when you run a GRID system. The price for this service will be a slightly less withdraw-able profit at the beginning, but you can choose to end the offer at any time. I really suggest you to take that offer even with big account balance, because you really should focus on safety first then on your profit. If you keep running the EA for a long time the profit will come.

Backtest and Optimization

If you are an Advanced User or you simply want to experiment with the potential of this EA you can always try to find new parameters' values, pairs and time frame that are profitable. I let many parameters adjustable exactly for this purpose

In this section I will suggest some sensible range and steps for parameters values, so you will avoid spending too much time on testing less useful values. The suggestions here are not intended as strict rules but more like a suggestions.

When you try to optimize the EA for a specific Pair or Time Frame, or you just want to test different parameters values, you should always run your optimization using "Control Points" method. The "Every tick" method will be too slow and the "Open Price only" will be too inaccurate. So the best procedure is to run the optimization with "Control Points" method, then identify good parameters and then validate the actual effectiveness of these using "Every tick".

Another consideration about test time range should be made. Some people think that testing the EA for the previous 15 years or even more is a good idea, so they try to find parameter values that achieve good result and then they are more confident about the future performance. This is not actually a good approach because the market tend to change so much during big periods(like 15 years). The economical fundamentals for, let's say, EURUSD were so much different 15 years ago and the forces in place were different. So trying to find a single combination of parameters for the such a whole period will only average the profits and will not give any more safeness about the future. On the contrary will give you a false sense of security. I suggest you to limit your time range backtesting/optimization to no more than 5 years(also 2 should be enough for some instruments). This is obviously my personal opinion so feel free to disagree and do your own tests as you wish.

Sensible ranges and steps

The values are Time Frame specific so the first value of the cell is for higher Time Frame and the second value is for lower Time Frame

Parameter	Start Values	Step	Stop Values
Dimension Cross Period	20 50	5 10	100 150
Direction Power Period	5 10	5	30 70

Level Period	50 100	50 100	200 500
Min Distance Pips	50 250	50 250	200 1000
Maximum Ratio	25 50	5	90 95
Candles to Consider	10	10	50 80
Candles to Calculate Average Trend	4	4	24
Candles to Calculate Average Noise	25 50	25 50	200 300
Candles for Potential Move	25 50	10 20	150 200
Potential Move Std	1,5	0,1	2,5 2,0

Contact

If you need to contact me for something you are able to reach me here

On mql5.com -> <https://www.mql5.com/en/users/apetrini>

By Email -> petrinic@gmail.com