
Pattern Explorer ©

Adviser operations manual



Vertex Investments LLC 2016

Version 1.0

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About adviser

Pattern Explorer © - unique instrument, which allows trader easily create automatic trading systems on base of famous Price Action candle patterns.

With Pattern Explorer © you get an opportunity:

- check workability of any patterns on any trading instruments and time frames.
- testing different types of taking profit and money loss limitation, find more profitable combinations for an exact pattern and on an exact instrument.
- using different filters, improve trading system profitability index.
- start automatic trading systems in work, which were created and checked in Metatrader 4 tester.
- use statistics about profitability of any Price Action pattern in your “hand operated” trading for reaching more special decisions.
- Go without programming skills you may immediately join to a process of creating and testing strategies, get a momentary experience, which develops system trader instinct, creating more profitable ideas and plans, which you may realize out of Pattern Explorer © and Price Action frames.

Price Action patterns

Overview

Expectations

Classic theory says about Price Action patterns (set ups) as about stated combinations of candles/bars, which appearance alarms about likely good moment for entrance to market. Pattern forms according to stated sample of price moves, which shows status, dynamics and market hidden potential. Using Price Action patterns as an alarm for deals opening, may give a trader some statistics advantages, because retry of known price moves sample is more expectable, rather than it wont retry again. Patterns are unique for all markets and time frames.

Reality

That is how theory says. What is on practice? A research made by Vertex Investments (in fact represents a huge scope of work) shows that Price Action patterns really work, but not always and not anywhere. How and where? Pattern Explorer © adviser will help you to study it out.

Adviser using

General recommendations

There are a lot of ideas about Price Action pattern and about trading system in whole, you may come away with Larry Williams, Linda Raschke and Larry Connors books. From the adviser ten built in patterns (version 1.0), we recommend to give your attention to the next patterns: Rails, Inside Bar, Volatility Breakout, Pin-Bar, Oops!(Gap) and 123-Pattern.

Working time frame may be any, but we give our preferences to daily time frame – D1, we recommend to start your work with the adviser with it (probably as an exception may be pattern # 5, because it appears rarely on daily diagrams, thus less quantity of deals).

According to our experience close StopLoss is not always ideal chose for Price Action pattern.

If we talk about taking a profit, than instead of traditional and fixed TakeProfit we recommend you to take a closer look at a technics which was developed by well-known mathematician- Ralph Vince, the technics name is “Bailout”. This setting exists in the adviser.

Under choosing an optimal criteria in strategy tester we advise you not to forget about Out-of-sample testing principle.

Something works on one trading instrument, but absolutely does not work on another. And on the contrary, if you are not succeed to select criteria for profitability of a stated pattern on one of instruments it does not mean that the pattern is out of work, on another symbol results may be different. Do not limit to one instrument or market.

Do not expect inordinate results from one system. Collect diversified portfolio of trading systems.

The method of averaging position (martingale) exists in the adviser, but we do not recommend to use such a risky way for trading.

Adviser settings

Base settings

<input type="checkbox"/> [BASE SETTINGS]			
<input type="checkbox"/>	Set trade lot			
<input type="checkbox"/> _____ Trade_Lot	0.01	0.01	0.0	0.0
<input type="checkbox"/>	Use to set auto-MM, by setting Trade_Lot on each Balance value.			
<input type="checkbox"/> _____ Balance	0	0	0	0
<input type="checkbox"/>	Work Timeframe (Set in minutes, ex. H1-60, D1-1440)			
<input type="checkbox"/> _____ TimeFrame	1440	1440	0	0

Trade_Lot - set Trading lot.

Balance - if you use a lot calculation according to a balance, it is necessary to set a value over zero, thus pointing on what deposit rate should suit a lot rate, which is set in Trade_Lot variable.

TimeFrame - working timeframe. For example if you set value D1 (daily TF), the adviser will use it apart from chosen time frame in strategy tester. Thus, alternatively for test speed rising in tester settings you may choose 1M or 5M mode, and test method “open bar”. Speed will be higher than under D1 testing “on all ticks”, and veracity will be a little bit lower.

Stop-Loss settings

	[STOP-LOSS SETTINGS]			
	1-Percent of ATR SL. 2-Points SL. 3-Percent of ATR step Averaging. 4-Points step Averaging.			
Mode	1	1	0	0
	ATR SL percent value			
ATR_percent	100	100	0	0
	Fixed points SL value			
Points	0	0	0	0
	Set: 'true' to use trailing-stop			
Trailing_stop	false	false		true
	Breakeven level in points. If 0 - NO use.			
Breakeven_pips	0	0	0	0
	Lot multiply koefficient. (Set if use Averaging)			
Koef	2.0	2.0	0.0	0.0

Mode - Mod-choose one of four ways for preventing losses:

- 1) Stop loss, value in stated percent from average candle range (ATR).
- 2) Stop loss, value in stated points number.
- 3) Instead of stop loss use an average position with a step equal to percentage from ATR, which settings sets further.
- 4) Instead of stop loss use an average position with a step in stated points numbers.

ATR_Percent - using percentage from ATR indicator value for stop loss setting or averaging step.












Points - stated in points value of stop loss or averaging step.

Trailing_stop - for using trailing-stop set «Use» (improving of existing stop in wake of growing profit of open position).

Breakeven_pips - profit points number after its achieving it is necessary to improve stop till in the black value. Set a value over zero, if it is necessary to use this function.

Koef - lot increasing index under using of averaging position. It does not mean anything if averaging function is not chosen in Mode.

Take-profit settings

 iii	[TAKE-PROFIT SETTINGS]			
 0000000000	0 - no use fixed TP. 1-Percent of ATR TP. 2-Points TP			
 _____TP_mode	0	0	0	
 0000000000	Percent of ATR for TP			
 _____TP_ATR_percent	100	100	0	
 0000000000	Fixed points TP.			
 _____TP_points	0	0	0	
 0000000000	Set: 'true' to use Bailout Exit (exit on the first profitable bar opening)			
 _____Bailout	true	false		true
 0000000000	Minimum position holding time before 'Bailout' (hours)			
 _____Min_wait_for_bailout	24.0	24.0	0.0	

TP_mode - choose one of three ways of taking profit:

- 1) do not use fixed Take-profit, but than it is necessary to set Bailout=true regime.
- 2) Take-profit, value in a stated percentage from average candle range (ATR).
- 3) Take-profit, value in a stated points numbers.

TP_ATR_Percent - using percentage from ATR indicator for Take-profit setting.

TP_Points - fixed value in Take-profit points.

Bailout - put “Use” if it is necessary to use «Bailout» taking profit technics, which presents an exit from some time, but in case if a deal is in a “profitable” position. [note: great technics] Function does not cancel settings of previously stated take-profits, but also can work without them.

Min_wait_for_bailout - minimal time for keeping position before «Bailout» exit. Sets in hours (0.1, 1, 24 etc.)

Entering trade filter settings

<input type="checkbox"/> li	[FILTERS SETTINGS]			
<input type="checkbox"/> <input type="checkbox"/>	Use MA to filter trade direction. 0-No filter. 1-Trend. 2-Counter-trend.			
<input type="checkbox"/> _____MA_filter_type	0	0	0	
<input type="checkbox"/> <input type="checkbox"/>	MA period			
<input type="checkbox"/> _____MA_period	15	15	0	
<input type="checkbox"/> <input type="checkbox"/>	Allow pending orders if other exist			
<input type="checkbox"/> _____Many_orders	true	false		true
<input type="checkbox"/> <input type="checkbox"/>	Set: 'true' to allow opening trades if other trades are opened			
<input type="checkbox"/> _____Many_deals	true	false		true
<input type="checkbox"/> <input type="checkbox"/>	Set: 'true' to prevent opening trades during high/low market volatility			
<input type="checkbox"/> _____High_volatility_filter	false	false		true
<input type="checkbox"/> _____Low_volatility_filter	false	false		true
<input type="checkbox"/> <input type="checkbox"/>	Set: 'true' to allow trading in specific day of week			
<input type="checkbox"/> _____Monday	true	false		true
<input type="checkbox"/> _____Tuesday	true	false		true
<input type="checkbox"/> _____Wednesday	true	false		true
<input type="checkbox"/> _____Thursday	true	false		true
<input type="checkbox"/> _____Friday	true	false		true
<input type="checkbox"/> <input type="checkbox"/>	Set: 'true' to allow trading in specific trading session time			
<input type="checkbox"/> _____Pacific	true	false		true
<input type="checkbox"/> _____Asia	true	false		true
<input type="checkbox"/> _____Europe	true	false		true
<input type="checkbox"/> _____America	true	false		true

Ma_filter_type - use Moving Average as a filter of trend. Put one of three values:

- 1) Do not use trend filter.
- 2) Separate deals only according to trend.
- 3) Separate deals only against trend.

MA_period - period for Moving Average calculation.

Many_orders - allow or forbid setting new pending orders under already existing.

Many_deals - allow or forbid setting new pending orders under opened deals.



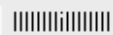
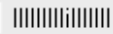
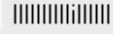
High_volatility_filter - set «Use» to forbid deals during high volatility period.

Low_volatility_filter - set «Use» to forbid deals during low volatility period.

DAYS - trade forbid/allow block of filters in stated days of week.

SESSIONS - trade forbid/allow block of filters in time of stated trading sessions.

Patterns settings

<input type="checkbox"/> 	[PATTERNS SETTINGS]			
<input type="checkbox"/> 	[1-Rails] [2-InsideBar] [3-OutsideBar] [4-DBHLC] [5-(123)Pattern]			
<input type="checkbox"/> 	[6-Gap] [7-PPR] [8-Volatility Breakout] [9-CPR] [10-PinBar]			
<input type="checkbox"/> _____Pattern	1	1	0	
<input type="checkbox"/> 	Set minimum pattern accuracy. (1-100)			
<input type="checkbox"/> _____Accuracy	50	50	0	
<input type="checkbox"/> 	Set 'true' to use patterns signals vise versa. (signal inversion)			
<input type="checkbox"/> _____Inversion	false	false		true

Pattern - choose one of built in patterns.

Accuracy - Accuracy – pattern exactness/ “quality” (from 1 till 100). General setting for all patterns, however id has different meaning for different patterns. The more Accuracy value, the

[1] - “Rails” pattern consists of larger candles with less expressed shadows.

[2] - inside bar has smaller size than previous one.

[3] - outside bar has bigger size than previous one, also has less expressed shadows.

[4] - building pattern candles are bigger, acceptable error at determining one-level extremum is less.

[5] - use more difficult criteria for searching of enter point.

[6] - gap is more expressed, previous bar is more volatile.

[7] - “reversal” extremum of middle pattern candle is more expressed.









[8] - counts towards more powerful breakout of bigger range.

[9] - gap is more expressed on last pattern candle opening.

[10] - PinBar has more expressed shadow.

P.S. Accuracy setting has an exactness/ “quality” conventional meaning, on practice it does not mean that better result of trading system. We recommend you to experiment with this setting, because achieved results under using different Accuracy values on different patterns/instruments/time frames – have big difference.

Other settings

  [OTHER SETTINGS]			
 	EA's MagicNumber			
 _____MagicNumber	10473921	10473921	0	
 	Order's comment			
 _____comment	Pattern Explorer			

MagicNumber - a unique number, which the adviser appropriate to an order for its further identification. Using the adviser in a trading on different strategies and different symbols set different numbers.

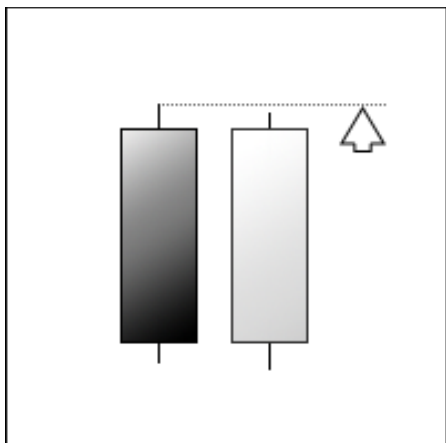
Comment - comment to an order. May be any comment.

Built-in pattern

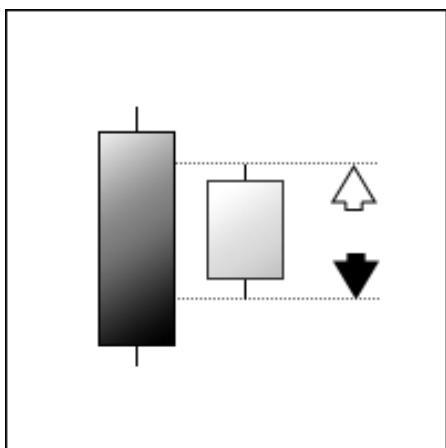
Overview

Further you may find information about Pattern Explorer © built-in patterns. The above information has a brief and formal description about patterns and its interpretation in a classical literature according to our topic. Do not take the information as a recommendation for trading with this patterns. Alternatively, according to our work with patterns experience shows that frequently a known pattern on some instrument alarms an opposite to information described in an open source. Often turns out that it is unworkable on the trading instrument/time frame. Thus, though the Pattern Explorer © adviser is not a constructor, which allows to implement every idea of trading system in life, anyway the usage list of built-in patterns is wide and we recommend you to use the adviser in aid of searching your own working algorithms. Do not pay extreme attention to a well known information about patterns, which usually on practice shows a meaning less thesis, copied from one source to another. Prove a usage of this or that pattern may only statistical information, which you may get from the Pattern Explorer © adviser, it is accessible for everybody and primarily for those traders who has no programming skills.

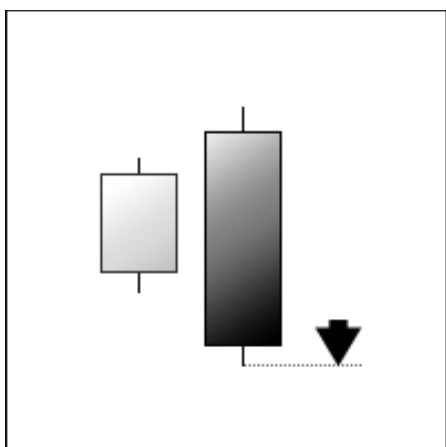
A list of accessible patterns



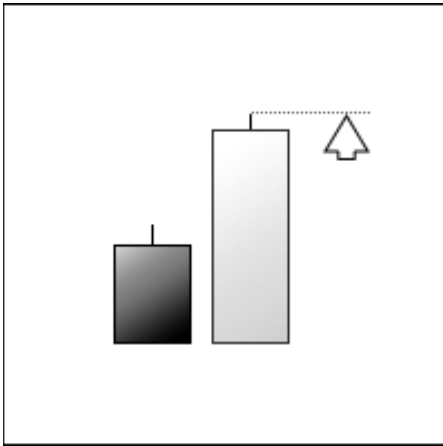
1) **Rails** – pattern, which consists of two candles, at that, the last one moves in an opposite direction to the first one, it alarms that previously started moving is “run out”, starts quick pullback. The entrance is usually on an opposite extremum of the first candle in the side of moving of the last one.



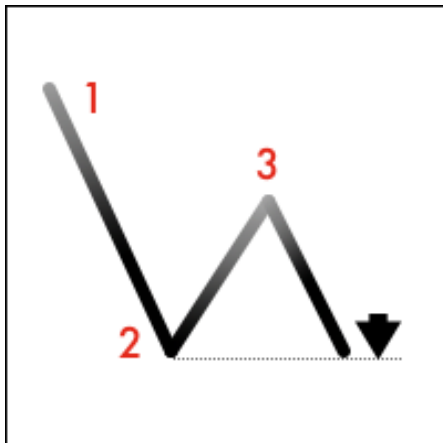
2) **Inside Bar** consists of two candles, at that, the last candle can not step out from a range of the previous one. Alarms about a moment of market “uncertainty” with possibility of further quick moving in a chosen direction. Allows to trade as a burst of a range of inside bar in both sides. Thus, try to catch, trend/contr-trend only.



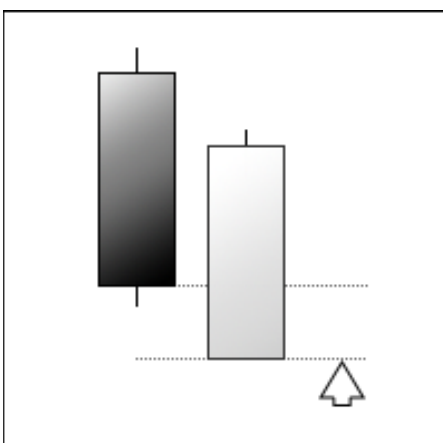
3) **Outside Bar** consists of two candles, at that, the last candle “engross” the previous one's range. Ususally consider two separated variants: bull's and bear's signal, depends on the direction of the last candle.



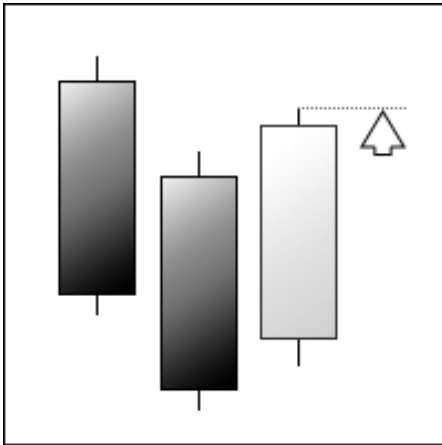
4) **DBHLC** - pattern consists of two candles with identical minimum/maximum. The reason of this kind of visual formation is that the price pushes away from valid level and confidently goes in an opposite direction. Usually it is advisable to use co-directional entrance for breaking maximum of the last candle.



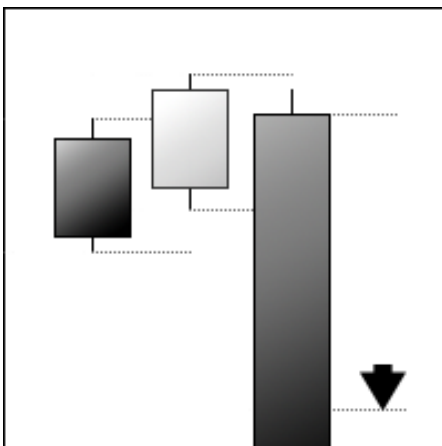
5) **123-Pattern** - pattern presents a repeated trying of breaking the level with price. Previously jump-off and correction were accomplished from the level. It is impossible to define unmistakable pattern with computer approach. A criteria set is using in the adviser, Accuracy setting gives an opportunity to choose the most appropriate variant for stated instrument/time frame.



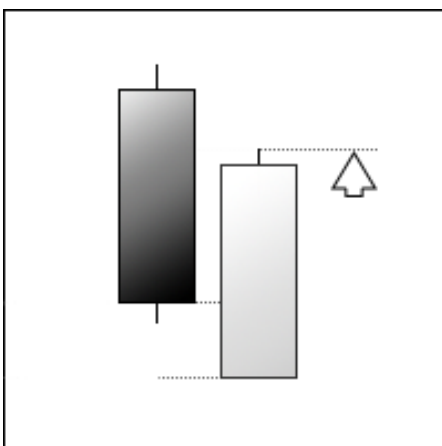
6) **Opps! (Gap)** - pattern presents a new bar opening with gap relative to the previous closing. Speak that often the price try for leveling this gap before moving somewhere.



7) **PPR** -pattern consists of three candles, the second candle renew the minimum of the first, but the third can not renew the minimum of the second, alternatively it closes higher of the maximum of the second. Thus, in this case we buy.

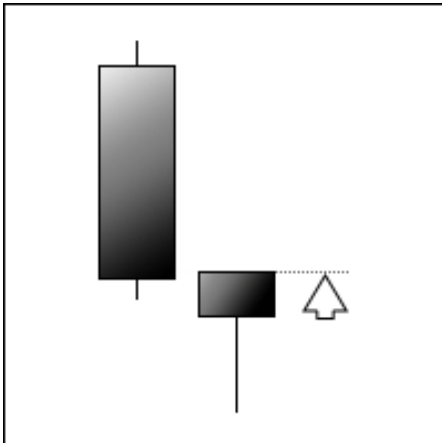


8) **Volatility Breakout** - the pattern core is breaking out with a candle of stated percentage from average daily volatility, it probably means that the price has a strong wish to move in a chosen direction. We try to jump over a leaving train. Selecting different levels for “catching” break out, we should try to find some stated regularity of movements in different instruments in different situations.



9) **CPR** (Closing price reversal) -

similar to Oops! (Gap) pattern. Only after opening with a gap, we wait for chosen direction confirmation, we enter after candle closing.



10) **Pin-Bar** - pattern with a long shadow and quiet short candle body. Offers to take as reversal, because this kind of form says about that the inside bar price is trying to move in a chosen direction, but market has no strength, so returns happens.

P.S. the adviser patterns list will be extending.

Example of making a trading strategy

Pattern №1 - Rails

Let's try to make a trading strategy on base of the first pattern. Choose the pattern in the adviser settings, in «PATTERN SETTINGS» item. Set the value 1 in Pattern variable.

Now we should appraise: do we have any advances entering the deal by this pattern's signal on chosen trading instrument and time frame. We talk about direct using of the pattern, without any additional entrance conditions and combinations of stop losses and take profits. Practice shows, that if pattern gives absolutely negative result in the context of this kind of testing, it is impossible to normalize the situation by adding different conditions.

There are a lot of ways of making trading strategies. Now we will try to start picking a trading instrument under a pattern. The first candidate will be EUR/USD currency pair – the most useable and top ranking index: [volatility]/[spread], pair.

Thus, we've chosen a pattern and an instrument. We will set a base time frame – D1 (TimeFrame-1440), but for the first test we also should set two base conditions, without this conditions the test has no sense, this conditions are stop loss and take profit. For the “test integrity” we suggest you to set the same TP and SL value for easier appraisalment. This way will show your chances for getting profit.

We may choose the equal TP and SL, value in a stated points numbers, but we prefer TP and SL, value in a stated percentage from average daily range (ATR), it allows us to equal the situation for patterns, which meet in different history years (for example, volatility of an instrument in 2015 and

2005 years may be absolutely different, in case of SL, value in stated item points, SL in 2015 and 2005 will be different).

For choosing SL and TP in percentage from ATR regime, we should set Mode=1 in «STOP-LOSS SETTINGS» item and TP_Mode=1 in «TAKEPROFIT SETTINGS» item. Set necessary value of calculated percentage from average daily ranges (ATR) for SL and TP, in ATR_percent variable and TP_ATR_percent in relevant items. In our case let the value be 150 (%), both for SL and TP. Do not forget to turn off «Bailout» regime (we do not need it now), set “false” in a relevant setting.

As soon as we assure that there are no additional conditions, we suggest to make the first try-out test. In tester settings choose “period” - M5 “open bar” regime. We use the adviser for D1(TimeFrame-1440) time frame, chosen “period” - M5 setting will not change it. It will give a task for a tester to make necessary daily candles from existing “five minutes”.

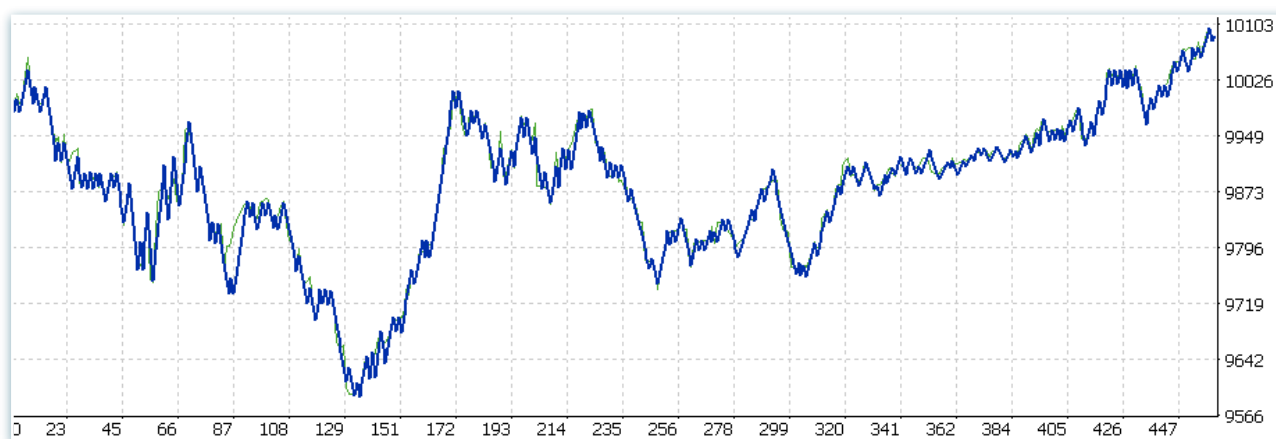
This way allows us to increase testing speed in ten times without losses, rather than “period” - D1 regime “All ticks”. That is what we need for primary tests or criteria optimization. Set history test period. We use “daily chart”, so we take at least 5-7 years. For example 2008-2016. Start the test!

Thus, during last eight years we have next situation:



Bars in test	593915	Ticks modelled	1186647	Modelling quality	n/a
Mismatched charts err...	0				
Initial deposit	10000.00			Spread	15
Total net profit	-237.97	Gross profit	2523.36	Gross loss	-2761.33
Profit factor	0.91	Expected payoff	-0.85		
Absolute drawdown	553.89	Maximal drawdown	600.83 (5.98%)	Relative drawdown	5.98% (600.83)
Total trades	281	Short positions (won %)	140 (47.86%)	Long positions (won %)	141 (51.77%)
		Profit trades (% of total)	140 (49.82%)	Loss trades (% of total)	141 (50.18%)
	Largest	profit trade	40.92	loss trade	-46.99
	Average	profit trade	18.02	loss trade	-19.58
	Maximum	consecutive wins (profit in ...	8 (194.08)	consecutive losses (loss in ...	7 (-114.55)
	Maximal	consecutive profit (count ...	194.08 (8)	consecutive loss (count of...	-157.62 (4)
	Average	consecutive wins	2	consecutive losses	2

281 deals, 49% un-profitable, conclusive result -237.97\$. Temporary drawdown came to -600\$. Pitty, isn't it? Not really. In spite of negative result, dynamics is almost positive on the last 2/3 intervals. Let's see what increasing of deals number by setting Accuracy in a less strict regime will give us. 281 deals in 8 years on daily diagram – it is not little, 3 deals in a month for D1 is normal, but anyway let's try. Accuracy was automatically = 50. Let's put = 20.



Bars in test	593915	Ticks modelled	1186647	Modelling quality	n/a
Mismatched charts err...	0				
Initial deposit	10000.00			Spread	15
Total net profit	86.48	Gross profit	4416.68	Gross loss	-4330.20
Profit factor	1.02	Expected payoff	0.19		
Absolute drawdown	410.86	Maximal drawdown	479.11 (4.76%)	Relative drawdown	4.76% (479.11)
Total trades	460	Short positions (won %)	221 (49.77%)	Long positions (won %)	239 (51.88%)
		Profit trades (% of total)	234 (50.87%)	Loss trades (% of total)	226 (49.13%)
	Largest	profit trade	48.58	loss trade	-46.99
	Average	profit trade	18.87	loss trade	-19.16
	Maximum	consecutive wins (profit in ...)	9 (228.52)	consecutive losses (loss in ...)	9 (-145.13)
	Maximal	consecutive profit (count ...)	228.52 (9)	consecutive loss (count of...)	-145.13 (9)
	Average	consecutive wins	2	consecutive losses	2

Already better, more deals -460, profit percentage 50.87%, but still that is not what we are looking for. Have no system making experience trader may have a next comment: “seems that the adviser defines Rails pattern not correctly, as it is well-known that Rails pattern is operational!” He does not know that “operational” in trading topic blog and operational in reality are two different things.

Partly, this trader is right, because it is seldom when someone recommends to use the pattern “bluntly”, usually recommends to refer with another market reality, for example: trend, contr-trend etc. Thus, we should continue researching of Rails pattern workability on EUR/USD D1 – we may add and combine conditions.

Let's delay EUR/USD to show the result of using the same pattern on different trading instruments (it contradicts a general notion about pattern “universalism”)

Try USD/JPY. Stay the last settings.



Bars in test	593947	Ticks modelled	1186736	Modelling quality	n/a
Mismatched charts err...	0				
Initial deposit	10000.00			Spread	15
Total net profit	517.78	Gross profit	3478.37	Gross loss	-2960.58
Profit factor	1.17	Expected payoff	1.13		
Absolute drawdown	77.42	Maximal drawdown	220.50 (2.09%)	Relative drawdown	2.09% (220.50)
Total trades	457	Short positions (won %)	221 (59.28%)	Long positions (won %)	236 (46.61%)
		Profit trades (% of total)	241 (52.74%)	Loss trades (% of total)	216 (47.26%)
	Largest	profit trade	44.62	loss trade	-42.97
	Average	profit trade	14.43	loss trade	-13.71
	Maximum	consecutive wins (profit in ...)	11 (344.37)	consecutive losses (loss in ...)	8 (-92.18)
	Maximal	consecutive profit (count ...)	344.37 (11)	consecutive loss (count of...)	-107.85 (3)
	Average	consecutive wins	2	consecutive losses	2

Much better! This result provokes on more detailed analysis, obviously that entering by Rails signal on USD/JPY D1 we have some statistical advantage. Let's try to increase it. Instead of sorting TP and SL sizes and using TP, we will try to use “Bailout” technics, which was developed by mathematician Ralph Willis. Relevant setting = true. Turn off TP: TP_mode=0. SL – leave former.



Bars in test	593947	Ticks modelled	1186736	Modelling quality	n/a
Mismatched charts errors	0				
Initial deposit	10000.00	Spread			
Total net profit	357.52	Gross profit	1631.08	Gross loss	-1273.57
Profit factor	1.28	Expected payoff	0.78		
Absolute drawdown	14.99	Maximal drawdown	128.33 (1.23%)	Relative drawdown	1.23% (128.33)
Total trades	457	Short positions (won %)	221 (69.68%)	Long positions (won %)	236 (68.22%)
		Profit trades (% of total)	315 (68.93%)	Loss trades (% of total)	142 (31.07%)
	Largest	profit trade	33.19	loss trade	-42.97
	Average	profit trade	5.18	loss trade	-8.97
	Maximum	consecutive wins (profit in ...)	21 (80.90)	consecutive losses (loss in ...)	5 (-24.03)
	Maximal	consecutive profit (count o...)	81.70 (8)	consecutive loss (count of l...)	-58.98 (2)
	Average	consecutive wins	3	consecutive losses	1

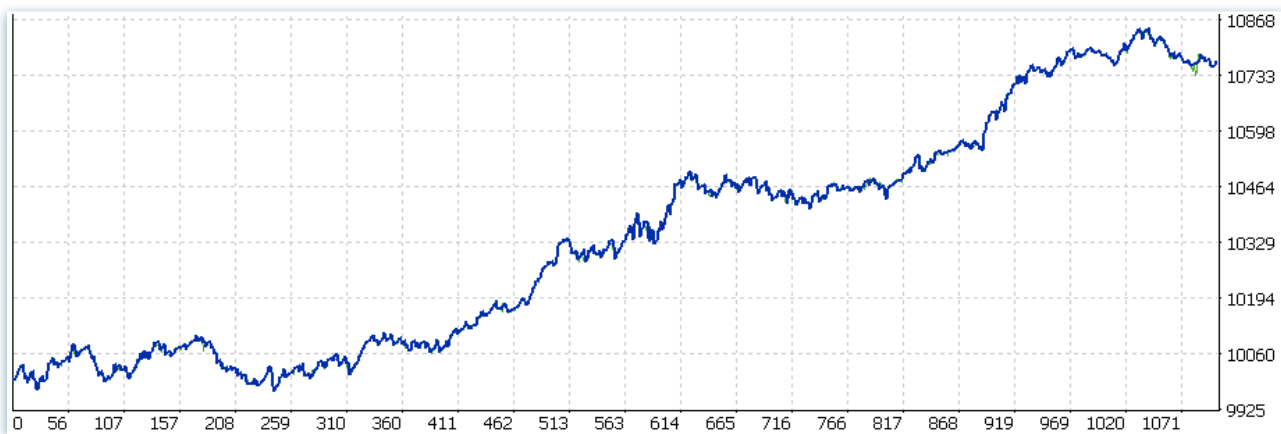
So, the result is obvious! Money result (with allowance for drawdown value) is not dramatically better, but we've achieved more smooth upleg, that is very well. Let's try to “play” with Accuracy value, put optimization [from 1 till 100 with step 2] and see how claims on pattern influence on result. Finding out, that the best results achieve when we set the minimal claims on pattern – it is unusual, but meets quite often. In this case, Accuracy = 1 gives the next result:



Bars in test	593947	Ticks modelled	1186736	Modelling quality	n/a
Mismatched charts err...	0				
Initial deposit	10000.00			Spread	15
Total net profit	463.24	Gross profit	2115.26	Gross loss	-1652.03
Profit factor	1.28	Expected payoff	0.79		
Absolute drawdown	28.57	Maximal drawdown	116.96 (1.11%)	Relative drawdown	1.11% (116.96)
Total trades	589	Short positions (won %)	283 (69.26%)	Long positions (won %)	306 (69.93%)
		Profit trades (% of total)	410 (69.61%)	Loss trades (% of total)	179 (30.39%)
	Largest	profit trade	41.30	loss trade	-42.97
	Average	profit trade	5.16	loss trade	-9.23
	Maximum	consecutive wins (profit in ...)	16 (62.83)	consecutive losses (loss in ...)	5 (-24.03)
	Maximal	consecutive profit (count ...)	73.37 (5)	consecutive loss (count of...)	-44.25 (3)
	Average	consecutive wins	3	consecutive losses	1

More deals, more profit, less drawdown. At that, we still did not add any extra conditions and did not set optimal exits, but pattern already shows the result. This fact inspires careful optimism. But before improving system's indexes, we should do one important thing. Let's make Out-of-sample test. Check the adviser on that part of history, which we did not use during criteria optimization process (always leave this kind of).

Leave a former settings and make 2001-2016 test.



Bars in test	1111096	Ticks modelled	2218534	Modelling quality	n/a
Mismatched charts err...	0				
Initial deposit	10000.00	Spread			
Total net profit	767.30	Gross profit	3757.48	Gross loss	-2990.18
Profit factor	1.26	Expected payoff	0.70		
Absolute drawdown	27.15	Maximal drawdown	136.97 (1.35%)	Relative drawdown	1.35% (136.97)
Total trades	1100	Short positions (won %)	520 (70.00%)	Long positions (won %)	580 (71.55%)
		Profit trades (% of total)	779 (70.82%)	Loss trades (% of total)	321 (29.18%)
	Largest	profit trade	41.31	loss trade	-42.97
	Average	profit trade	4.82	loss trade	-9.32
	Maximum	consecutive wins (profit in ...	21 (93.03)	consecutive losses (loss in ...	5 (-43.10)
	Maximal	consecutive profit (count ...	95.77 (18)	consecutive loss (count of...	-63.64 (4)
	Average	consecutive wins	3	consecutive losses	1

As you can see, we are lucky. Pattern is really stable on a long history interval. We may continue trying for result improving.

Let's try to trade pattern only according to trend determined with moving average (MA). In «FILTER SETTINGS» set MA_filter_type = 1, for example MA_period is 10. If “bull” pattern forms higher than 10 days MA, we buy. If lower, we pass the deal. Conversely for short positions.



Bars in test	1111096	Ticks modelled	2218534	Modelling quality	n/a
Mismatched charts err...	0				
Initial deposit	10000.00			Spread	15
Total net profit	622.94	Gross profit	1632.31	Gross loss	-1009.37
Profit factor	1.62	Expected payoff	1.45		
Absolute drawdown	6.84	Maximal drawdown	109.11 (1.04%)	Relative drawdown	1.04% (109.11)
Total trades	430	Short positions (won %)	184 (74.46%)	Long positions (won %)	246 (77.24%)
		Profit trades (% of total)	327 (76.05%)	Loss trades (% of total)	103 (23.95%)
	Largest	profit trade	41.31	loss trade	-31.98
	Average	profit trade	4.99	loss trade	-9.80
	Maximum	consecutive wins (profit in ...)	19 (85.22)	consecutive losses (loss in ...)	3 (-32.18)
	Maximal	consecutive profit (count ...)	87.23 (9)	consecutive loss (count of...)	-34.41 (2)
	Average	consecutive wins	4	consecutive losses	1

Interesting result. Visually the diagram became more beautiful, but the result according to $[\text{profit}]/[\text{maximum drawdown}]$ criteria increased not much, 5.7 against 5.63, what should we choose? It is a debatable question. May be we should stay on a variant with large number of deals and look at detailed work of another filter, for example filter, which limits trading in stated days of week, what do you think?

Or.. is it too early for now to continue with this filter? Because we still did not set an optimal stop loss, we automatically set a value equals 150% from ATR. Is there a better variant? 200%, 250%? Should we start a trailing stop? Generally, how often does profitable deal go in a minus? What if we upon reaching stated profit set SL "in the black"?

We still did not set profit as well. Do we exit from the position too early? What if we should give a chance for price more time? Realize the potential of movement? Probably we vainly do not set a fixed TP? As soon as we find

main position, we may experiment with weekday filters etc. By the way, what if drawdown of signal level for entering a deal in a pattern during dull asian and pacific sessions are usually false? At least, may be it is better not to buy, but sell under drawdown of signal level in Rails “bull” pattern? Who said that it is “bull's” one? Let's check? With the adviser Pattern Explorer © this challenge is easier. Wish you successful searching!

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