

## Description

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Transformer – is a strategy builder that implements specified actions when the signal occurs:

- Uses the built-in version of another product – Rooster, as a signal provider;
- Basic features – SL, TP, lot fixed and floating;
- Trailing and breakeven stops;
- Martingale option;
- Enhanced scheduler allows to set trading periods separately for each day of week.

## Input Settings

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### **EA BASIC SECTION:**

**StopLoss** – Stop Loss value in points.

**TakeProfit** – Take Profit value in points.

**Lot calculation mode** – mode of determining the lot size:

Lot fixed	fixed value
Lot based on Margin	calculate upon margin requirements as a percentage of the deposit balance
Lot based on StopLoss	calculate upon <b>StopLoss</b> as a percentage of the deposit balance

**Lot value/percentage** – the exact value in the fixed value mode, the percentage in other cases.

**Trailing Stop mode** – trailing stop operating mode:

Off	turned off
On	simple trailing
On, only profit	simple trailing, begins working in the profit area
On, breakeven	place Stop Loss at the breakeven

**Trailing distance** – the distance between the price and Stop Loss in points for trailing and breakeven modes.

**Trailing step** – the step of Stop Loss change in points for trailing mode.

**Maximum orders** – the maximum allowed number of opened orders of each type.

**Magic number** – unique ID for orders opened by robot. Martingale option increases this number 100 times and uses the range of hundred for martingale orders.

Can be < 0, in that case EA considers all opened orders as its own (regardless of the currency or ID), new orders are opened with the ID = 0.

## CONDITIONS SECTION:

**Condition1/2/3/4/5/6** – specifically formatted string containing conditions for signal:

1. Detection is case insensitive, so you can use either upper or lower case letters;
2. Delimiter is space symbol;
3. Simple condition – **Expression Relator Expression**,  
condensed version – **Expression** is equal to **Expression = True**;
4. Mixed condition – **Expression Relator Expression AND Expression Relator Expression AND ...**;  
**Expression** can be a simple **Value** as well as an arithmetic operation between **Values**, permissible to use operations **+** **-** **\*** **/** and parentheses **( )** (see [Example 1 for Rooster](#));
5. Indicator and OHLCV **Values**, could be followed with “index” – a positive number in square brackets **[..]**, that means bar shift to the past (see [Example 2 for Rooster](#)).

### **Possible Values:**

IndicatorA# или IndA# IndicatorB# или IndB# IndicatorC# или IndC# IndicatorD# или IndD# IndicatorE# или IndE#	Indicator value, where # - indicator line index (see below), [..] allowed
Ask	Ask price
Bid	Bid price
Close или C CloseA или CA ...	Close price of the bar on the current or the other timeframe, [..] allowed
Open или O OpenA или OA ...	Open price of the bar on the current or the other timeframe, [..] allowed
High или H HighA или HA ...	High price of the bar on the current or the other timeframe, [..] allowed
Low или L LowA или LA ...	Low price of the bar on the current or the other timeframe, [..] allowed
Volume или V VolumeA или VA ...	Tick volume of the bar on the current or the other timeframe, [..] allowed
Any number	User-defined level equal to that number
Arrow	for arrow-type indicators, should be placed on the right side of expression and used together with Relator = (see <a href="#">Example 3 for Rooster</a> )
Point or P	point – the min. step of price change
True	true (1)
False	false (0)
NewBar or Bar	check for the new bar, returns true/false
NewTick or Tick	check for the new tick, returns true/false

#all or #a #buy or #b #sell or #s #buyall or #ba #sellall or #sa #market or #mrkt #pending or #pend #buystop or #bs #sellstop or #ss #buylimit or #b #selllimit or #sl	number of opened orders of certain type
\$Pall or \$Pa \$Pbuy or \$Pb \$Psell or \$Ps	total profit/loss in points of all orders of certain type
\$Mall or \$Ma \$Mbuy or \$Mb \$Msell or \$Ms	total profit/loss in deposit currency of all orders of certain type
Balance or Bal	current balance
Equity or Eq	current equity
Rooster# or R#	Rooster value, where # - indicator line index: 0 – aqua arrows, 1 – red arrows, 2 – lime arrows, 3 – magenta arrows, [..] allowed
X XX Y YY Z ZZ	replacements, returns the value of variable

#### Possible Relators:

>	Greater
>=	Greater or equal
<	Less
<=	Less or equal
=	Equal
!= or <>	Not equal
crossup	Value on the left side is currently greater than Value at the right side of Relator, whereas it was less at the previous bar
crossdn	Value on the left side is currently less than Value at the right side of Relator, whereas it was greater at the previous bar
cross	crossup or crossdn regardless of direction

Line index is a non-negative integer value, the number of indicator line, where to get values from.

For built-in indicators with one line, index = 0.

For built-in indicators with more than one line, see [Appendix A](#).

For custom indicators, index can be obtained by using “colors” tab of indicator properties, indexation starts from 0.

**Action1/2/3/4/5/6** – specifically formatted string a sequence of actions:

1. Detection is case insensitive, so you can use either upper or lower case letters;
2. Delimiter is comma;

3. Example – **Action,Action...** ;
4. Every action in the list is processed regardless of the result of preceding one;

**Possible actions:**

-all or -a	close all market orders and delete all pending orders
-buyall or -ba	close all market BUYs and delete all pending BUYLIMITs, BUYSTOPs
-sellall or -sa	close all market SELLs and delete all pending SELLLIMITs, SELLSTOPs
-buy or -b	close all market BUYs
-sell or -s	close all market SELLs
-buylimit or -bl	delete all pending BUYLIMITs
-selllimit or -sl	delete all pending SELLLIMITs
-buystop or -bs	delete all pending BUYSTOPs
-sellstop or -ss	delete all pending SELLSTOPs
+buy or +b	open market BUY
+sell or +s	open market SELL
+buylimit(price) or +bl(price)	open pending BUYLIMIT, parameters: 1. price – <b>Expression</b> for openprice
+selllimit(price) or +sl(price)	open pending SELLLIMIT, parameters: 1. price – <b>Expression</b> for openprice
+buystop(price) or +bs(price)	open pending BUYSTOP, parameters: 1. price – <b>Expression</b> for openprice
+sellstop(price) or +ss(price)	open pending SELLSTOP, parameters: 1. price – <b>Expression</b> for openprice
+grid(type,num,price,step,mult)	opens a grid of pending orders, parameters: 1. type – <b>buystop</b> or <b>bs</b> or <b>sellstop</b> or <b>ss</b> or <b>buylimit</b> or <b>bl</b> or <b>selllimit</b> or <b>sl</b> ; 2. num – <b>number</b> of orders; 3. price – <b>Expression</b> for openprice of the 1 <sup>st</sup> order; 4. step – <b>Expression</b> for distance in points between orders; 5. mult – <b>number</b> to multiply the lotsize of each following order (default =1)
trailing(mode,type,base,value)	manual trailing stop, parameters: 1. mode: <b>0</b> – off, <b>1</b> – on, <b>2</b> – only profit, <b>3</b> – breakeven; 2. type – <b>all</b> or <b>buy</b> or <b>sell</b> ; 3. base – <b>lvl</b> (by value) or <b>dist</b> (by distance); 4. value – <b>Expression</b> for level or distance (in points), depending on the base

**ROOSTER SECTION:**

***RCondition1/2/3/4, Bar shift for alert***

Settings for Rooster indicator, they are required if you use **Rooster#** value in conditions.

## **INDICATORS SECTION:**

**IndicatorA/B/C/D/E** – select your indicator from the drop-down box.

**Path and parameters** – input here filename of the indicator with path and/or list of parameters.

1. Delimiter is comma, don't use spaces as delimiter;
2. Filename is required for **Custom Indicator** case selected in the box, it must contain path from **\MQL5\Indicators\** directory and the filename itself;
3. You can't skip parameters in sequence, but you can define them in quantity less than required – last parameters will get default values. Follow the type and order of parameters, this will allow to load an indicator correctly. Integer and double type parameters must begin with 0-9 (number) or - (minus) symbol, double type in addition must contain . (dot), the rest is considered as string type. You can use standard MQL enumerations instead of integer numbers, see [Appendix B](#). Parameters put in quotation marks are forcibly considered as string type. If this setting is empty (or contains only filename for **Custom Indicator** case), indicator is loaded with default parameters;
4. You can't define manually more than 5 first parameters for **Custom Indicator** in MT4 version. Use method described in [Automatization 3](#). to bypass this limitation.

**TimeFrame** – indicator's timeframe, may not be lower than the current timeframe. Also this setting can be used for getting value of **OHLCV** timeseries from other timeframes. Data is retrieved from the bar at the other timeframe which is time-synchronized with the current bar. When used together with the "index" [...], first it makes time synchronization, then shift by the "index". Example: **CloseA[5]** – take time of the current bar, find on TimeFrameA the bar with the same time or nearest, then shift by 5 bars to the past.

**Round indicator values** – precision for normalization of indicator values.

## **EA ADVANCED SECTION:**

**Martingale mode:**

Off	turned off
Increase on loss, reset on profit	increase lot size after loss, reset after profit
Increase on profit, reset on loss	increase lot size after profit, reset after loss

**Martingale multiplier** – lot size multiplier for martingale orders.

**Martingale counter** – maximum length of the sequence of orders with increased lot size.

**Virtual Stops** – virtually tracked StopLoss and TakeProfit levels.

off	turned off
auto	is off by default, will turn on after the error ERR_INVALID_STOPS(130) occurring
on	turned on

**Auto rescale for 5-digit** – to increase automatically point size on 5-digit accounts, affects to settings **StopLoss**, **TakeProfit**, **Trailing distance**, **Trailing step**, value of **Point** etc.

**Attempts** – maximum number of attempts of a single order opening/closing/modifying.

**Expiration (min) for pending orders** – expiration period of orders BUYLIMIT, SELLLIMIT, BUYSTOP, SELLSTOP in minutes, 0 – turned off.

### **SCHEDULER SECTION:**

**Scheduler mode:**

Off	turned off
Deny entry	outside of trading interval existing orders are to close according the rules, new orders are not to open
Force exit	outside of trading interval existing orders are to close immediately, new orders are not to open

**Monday preset** – template for monday.

**Tuesday preset** – template for tuesday.

**Wednesday preset** – template for wednesday.

**Thursday preset** – template for thursday.

**Friday preset** – template for friday.

**Saturday preset** – template for saturday.

**Sunday preset** – template for sunday.

Rules for preset:

1. Delimiter between trading intervals is comma;
2. Delimiter between beginning and ending time of the trading interval is hyphen;
3. Delimiter between hours and minutes is colon;
4. Example:
  - empty** – trade is denied (the whole day);
  - 0-24** or **0:00-24:00** – trade is allowed from 00:00:00 to 23:59:59 inclusive (the whole day);
  - 12:37-15:11** – trade is allowed from 12:37:00 to 15:10:59 inclusive.

### **REPLACEMENTS SECTION:**

**X Y Z ZZ YY ZZ** – six variables that can be used as replacements for numbers in **Expressions** and indicator settings. For optimization purposes. For optimization purposes.

## Examples

See also examples for **Rooster**.

### **EXAMPLE1: BASIC SETTINGS:**

#### **Objective:**

Indicators – EMAfast(10), EMASlow(20);

Reverse to buy – cross EMAfast ↗ EMASlow;

Reverse to sell – cross EMAfast ↘ EMASlow;

All signals at the closed bar, SL = 5, TP = 10, risk per trade = 2% of balance,

trailing stop in profit, distance = 5 points, step = 1 point.

#### **Settings:**

Variable	Value
EA BASIC	
StopLoss	5
TakeProfit	10
Lot calculation mode	Lot based on StopLoss
Lot value/percentage	2.0
Trailing Stop mode	On, only profit
Trailing distance	5
Trailing step	1
Maximum orders	1
Magic number	666
CONDITIONS	
Condition 1	Newbar AND IndA0[1] crossup IndB0[1]
Action 1	-sell, +buy
Condition 2	Newbar AND IndA0[1] crossdn IndB0[1]
Action 2	+buy, +sell
Condition 3	
Action 3	
Condition 4	
Action 4	
Condition 5	
Action 5	
Condition 6	
Action 6	
ROOSTER	
RCondition1	
RCondition2	
RCondition3	
RCondition4	
Bar shift for alert	1
INDICATORS	
IndicatorA	Moving Average
Path and parameters	10,0,MODE_EMA
TimeFrame	current
IndicatorB	Moving Average
Path and parameters	20,0,MODE_EMA
TimeFrame	current
IndicatorC	Custom Indicator
Path and parameters	
TimeFrame	current
IndicatorD	Custom Indicator
Path and parameters	

## EXAMPLE2: TRACKING OTHER ORDERS:

### **Objective:**

Trailing stop applied to orders opened manually or by another EA + closing by drawdown:

Trailing stop – volatile, by distance equal to  $2 * ATR(14)$ ;

Close all on drawdown 10% to balance.

### **Settings:**

Magic number = ..., where ... is another EA's ID, or = 0 for manual orders.

Variable	Value
~~~~~EA BASIC~~~~~	
StopLoss	0
TakeProfit	0
Lot calculation mode	Lot fixed
Lot value/percentage	0.1
Trailing Stop mode	Off
Trailing distance	5
Trailing step	1
Maximum orders	1
Magic number	0
~~~~~CONDITIONS~~~~~	
Condition1	Newtick
Action1	trailing(1,all,dist,2*IndA0/P)
Condition2	\$Mall <= -0.1*Balance
Action2	-all
Condition3	
Action3	
Condition4	
Action4	
Condition5	
Action5	
Condition6	
Action6	
~~~~~ROOSTER~~~~~	
RCondition1	
RCondition2	
RCondition3	
RCondition4	
Bar shift for alert	1
~~~~~INDICATORS~~~~~	
IndicatorA	Average True Range
Path and parameters	14
TimeFrame	current
IndicatorB	Custom Indicator
Path and parameters	
TimeFrame	current
IndicatorC	Custom Indicator
Path and parameters	
TimeFrame	current
IndicatorD	Custom Indicator
Path and parameters	
TimeFrame	current
IndicatorE	Custom Indicator
Path and parameters	

Buttons: Load, Save, OK, Отмена, Reset



## Appendix A

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Buffer indexation for indicators with more than 1 line:

	MT4	MT5
MACD RVI Stochastic	main = 0 signal = 1	
ADX	main = 0 +DI = 1 -DI = 2	
Bollinger Bands	middle = 0 upper = 1 lower = 2	
Envelopes Fractals	upper = 1 lower = 2	upper = 0 lower = 1
Alligator	jaws = 1 teeth = 2 lips = 3	jaws = 0 teeth = 1 lips = 2
Gator	upper = 1 lower = 2	upper = 0 lower = 2
Ichimoku	tenkan = 1 kijun = 2 senkoua = 3 senkoub = 4 chinkou = 5	tenkan = 0 kijun = 1 senkoua = 2 senkoub = 3 chinkou = 4

## Appendix B

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Enumerations:

PRICE_CLOSE	1	MODE_SMA	0
PRICE_OPEN	2	MODE_EMA	1
PRICE_HIGH	3	MODE_SMMA	2
PRICE_LOW	4	MODE_LWMA	3
PRICE_MEDIAN	5	VOLUME_TICK	0
PRICE_TYPICAL	6	VOLUME_REAL	1
PRICE_WEIGHTED	7	STO_LOWHIGH	0
		STO_CLOSECLOSE	1