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Tech. Assignments for **hedging** Expert Advisor-Panel **for MT-5**

The purpose of this Product is to facilitate routine manual trading by taking care of open trades !   
All trading levels (TR and SL) will be "VIRTUAL", i.e. graphical lines, when touching them - partially split LOT into positions or close them. i.e. graphical lines, when touching them - to partially split LOT into positions, or to close by SL on specified conditions !

All testing will take place on TF m5 Euro-Dollar.

**Basically - if you HAVE a ready-made Trading Panel template - it's a priority, as it can be redesigned (!)**

**By "Multicurrency" :**

The panel should be POLU-multi-currency :

In the **"Non-multicurrency part". - The** panel will be set on different Symbols, or on different TFs of the same Symbol, so it is necessary to control ONLY YOUR - working - TF, so that when analyzing the chart - when switching the TF = trawl steps (trawl step - bar), and other moments were not confused ... (!).

For this purpose - it is necessary to SAVE all settings for the Working TF to a file, and read them at the next Terminal launches (!).

and in the **"Multi-currency part" - it** is necessary to track Accounting from other copies of the Panel on other TFs, and other Symbols, and enter them into a single table *(at your professional discretion - you can make the 1st copy of the Panel = Main, and the rest = child copies, and in the Main Panel send trade data from the child copies).*

+ 2 additional buttons in the Table = close all profitable / losing trades.

Transaction support - by Magik

Please: give a demo at the end of each "step"

A brief list of the scope of the work (much is a "classic of the genre") :

1. To accompany ONLY YOUR open positions = by Magik.
2. Dynamic spread *(there is a formula)*
3. Selection of "working TF" *(so that when switching TFs - the SL trawl steps and everything else would not be disrupted)*
4. Virtual TR and SL levels, + partial closing of the position on virtual. TR-1-2-3
5. breakeven level,
6. martin + locking *(Martin lot increase = automatic lot calculation)*,
7. Graphical part :   
   - Control Panel with several tabs (Setup, Trade, Partial Close, Trade Info) ;   
   - minimization of the Panel + On/Off of the whole graphical part *(for installation* on *VPS)*;   
   - graphical piping of open positions (individual panel with personal settings of Traal SL on the sample);
8. 2 types of Tral SL, with Stop-Loss activation by *Close-1*,
9. Spread control *(if spread is greater than XX = don't trade...)*

~~Request:   
for Strategy Tester:  
in the internal parameters - Strategy selection (Main or Micro-trading), dynamic lot + starting lot size, Martin, ZZ parameters.   
Also in the Strategy Tester - it is  
 necessary to~~ **~~SHOW the~~** ~~indicator ZZ on the Chart to visually check the Algorithm (!)~~

***Basic Parameters :*** *(for familiarization, because below, on page 4⭢ is a step-by-step process with a detailed description of all functions (!) (then these many parameters == put in the Panel -->> in the tab "Settings" (thumbnail of the Panel on page XX)*

1. Automatically determine the "number of digits" after the decimal point,
2. Slippage = yes, magnitude of slippage = X pips,
3. Starting Lot = 0.03, then Dynamic Lot for newly opened positions, ***~~does not affect LOCK Martin~~***:   
   Dynamic Lot formula: Lot = ((Balance \* 80) ÷ 100'000) ÷ 10 (***checked in Excel (!)***   
   \* maximum lot size = 10 *(given by the Broker, you should take into account that the Dynamic Lot should not go above this value)   
   (... i.e. the lot of newly opened positions will be calculated based on the amount on the balance)*
4. Breakeven level = 15 pips, (also in the form of a rectangle), Color purple.   
   Closes % of lot ON RETURN *(details below)*
5. Levels of virtual TR and SL : TR-1 = 50 pirs, TR-2 = 150, TR-3 = 300, SL = 55 ;
6. Parameter "Breakdown depth filter of the SL" = 12 pips (by 5-digit Broker) *(entered manually)*;
7. Max. spread = XX pips. If the spread is greater than that, DO NOT TRADE (do *not open new positions, do not split the lot, and do not close at Stop Loss*) (!).

Purely Cosmetic Moment🡺 from the Moment of putting the Expert Advisor on the chart = put a VERY FAT vertical line (you can even a vertical rectangle with a width of 4 bars, and height from the Minimum price to the Maximum price on the chart), ... or 4-5 thick fat vertical lines (here already - as easier), + a signature : "Beginning of scalping".

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**Step 1 - Make a simple Control Panel with several "Tabs" :**The panel needs to be firmly and immovably anchored to the Upper Left corner of the chart!

(!) In the Panel - all changes == must concern ONLY newly opened transactions (!)

At this point🡺 make a **complete "mock-up" of the** Panel :

* make all Tabs and buttons, switching Tabs and pressing/unpressing buttons , places to enter parameters;
* you can also make a fully working button / - Collapse / Expand Panel , + Current Spread (average spread for 4 hours);

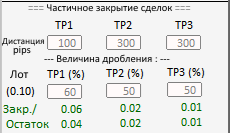
**And all other Parameters == will be "stitched in" as they are developed**

|  |  |
| --- | --- |
| Approximate view of the Panel : (size approximately 345 x 468) | Icons Description : |
| Collapsed view of the Panel (Header):    Expanded view of the Panel = Main part + Tabs: The screenshots below are of the active "Trade" tab    Add :  + LOT "+" and "-" , check mark🗹 Dynamic, Martin marked "⭧ Auto-Martin Lot" *(details on page 5).*  *(i.e. the lot will be OR fixed, or Dynamic)*  + Buy and Sell buttons,  + SL Parameters for Newly Opened Positions : | / - Collapse / Expand Panel ;  + Broker's commission, +  Swap,  + Current SPREAD (and in brackets = average spread for 4 hours),  + Total amount of drawdown on the current Chart for all open positions *(more details⭢ p.5, Step - 7)*,  + - Show "Trading History" (only from the Working TF(!),  + - show trade levels (from the PCM on the chart) (only from the Working TF(!), ...separately AND from the main trade, and separately from the "Micro-trade".  - Reserve button *~~(additional indicator for a negotiated price)~~* ~~- draws candlesticks from a higher TF (optional)~~ **~~against the~~** ~~chart~~ **~~background~~**~~, sample:~~  [~~https://www.mql5.com/ru/market/product/68641~~](https://www.mql5.com/ru/market/product/68641)  **~~... But against the background of⭢ candlestick from the senior TF to draw the width to the right, so that on the current TF it will be clearer when the candlestick on the senior TF (!) closes.~~**  + Broker's time (in the Panel header) |
| Buttons : Trade, In parts, Settings, Info | ⭠ pressing = opens INPUTS\* with different content |
| \* As a hint = make all tabs, and elements of the Panel🡺 "open", and PRINT them to the right side of the Chart for a year ahead, and when "calling" a new tab = PRINT the current tab to the right side of the Chart, and move the new tab to the Panel (!). | |

**Additional buttons on the Panel :**

* Button "Graphics" - On/Off all graphics (*for installing the Expert Advisor on VPS*). When clicked - ALL graphical elements created by the Advisor == remove them from the chart, and when x2 clicks (pause between clicks = up to 1 sec) on the chart (anywhere on the chart) == return them to the chart again.  
  *(and when hovering the Cursor - show the Comment with the button description).*
* Parameter "ATR(14) = XX"⭢ is not changeable, shows its Value,   
  and Parameter "ATR(100) = XX"⭢ its Period is changeable in the "Settings" Tab.
* ++ Add Button to Save **all settings to File** (file name = Symbol + TF) (for Work TF) ,++ and a button to READ all settings from the file for the Working TF.

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In the Panel, make multiple Tabs:

🗊 **Trade tab** All as described above⮥ (in the Table, and under the Table)**.**

🗊 **Piece by piece tab:** *(has Source on mt-4)* ⭢⭢ ⭢ ⭢ ⭢ ⭢

🗊 Info **tab** - Trade information from your existing ready-made codes;   
If you do not have a ready-made code, then all details on the Info tab⭢ are described on pages 5-6. 5-6

🗊 **The "**Settings" **tab** - All other parameters should be placed there:

Parameters can be listed in 1-2 columns (!)

* Parameter "Breakdown depth filter of the SL" = 12 pips (by 5-digit Broker) *(entered manually)*;
* Parameter "ATR period" = 100 bars (entered manually), it is used to calculate "Average ATR for the specified period"   
  (output the result⭢ in the "Trade" tab ⭢ "ATR(100) = XX",
* LOCK + Martingale *(lot increase if the position closed in a loss, + position reversal (Lock) )* :   
  lot increment step = auto ; *(all details below)*  
  Maximum lot by Martin = Current dynamic "Lot x [Multiplier]". , next to show the resulting Lot size = (X.XX)
* Max. spread = XX pips. If the spread is greater than that, DO NOT TRADE (do *not open new positions, do not split the lot, and do not close at Stop Loss*) (!).

========= *Upon completion of this***⮥** *Step - please provide a demo sample for testing* =========

**Step 2 - opening of trades + graphical linking of open positions:**

Opening trades - by using the Buy and Sell buttons in the Panel⭢ Trade tab.

Lot of the opened deal - either fixed, or Dynamic, or by Martin (!)

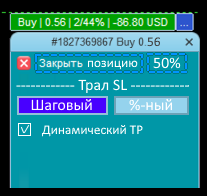
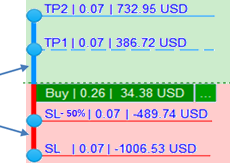
* If the lot is FIXED, i.e. the checkbox🗹 "Dynamic" is unchecked (🞏 ), then near the Lot input field :   
  draw 2 buttons "+" and "-" for step increase of the lot (step = 0.01, when CTRL is   
  pressed step = 0.10),
* If the lot is🗹 "Dynamic", then the Dynamic Lot Formula : *(duplicate from Basic Parameters (p.1)* :

Lot = ((Balance \* 80) ÷ 100'000) ÷ 10 (round the Lot size to the nearest x2 decimal places) (***tested in Excel (!)***

\* minimum Dynamic lot size = 0.03,

\* maximum lot size = 10 *(given by the Broker, it is necessary to take into account that the Dynamic Lot should not rise above this value)   
(... i.e. the dynamic lot of newly opened positions will be calculated based on* ***the amount on the balance****)*

... All open positions - must have "graphical strapping" + customized SL trawl control panel.

... now - at this stage - the graphical binding of open positions should be minimal, and consist of:   
a) an individual panel ⭢ , containing information : Buy (Sell)|lot|sum, and the button [...  
] : + when opening a position - the panel should be   
drawn in the RIGHT part of the chart, on the -3rd bar,   
+ the panel itself == can be moved left-right,   
b) on the panel when pressing the button [...] :

* + Change the color of the [...] button from green to light blue,
  + And expand the "context menu" with options :
* + Close Position button *(100%)* and the "50%" button next to it,
* + x2 buttons for selecting Trailing Stop (or "Step", or "%-") *(description of Trails*⭢ *us p.XX, Step-X)   
  When pressing one of the buttons == change its color (!)   
  (check pressing - release buttons*⭢ *when pressing button "Step" ==   
  release button "%-", and vice versa)*
* Check🗹 - "Dynamic TP" *(Function in reserve, so make only as "text" - to reserve a place in the drop-down "context menu")*

========= *Upon completion of this***⮥** *Step - please provide a demo sample for testing* =========

**Step 3 - Breakeven Level :**

The == parameter itself should be moved to the "Trade" tab in the Panel.

Under (above) the open position = draw a RIGHT Angle (fill - RGB = 255, 0, 220),

Width = the width of the "Individual panel"

When the price is **completely out of the**   
BOO, i.e. :   
\* for Buy⭢ Low-1 above the BOO,   
\* for Sell⭢ High-1 below the BOO,   
and then when the Price ... ... ... ... returns to the BOO again = on touch = close 70% (of the current lot balance on the position (!).

*If there is =< 0.02 lot left on the position, then at the next price decrease - ignore the closing by Ur.Boo, and close this position by its Stop Loss.*

============= **Step 4 - "Partial closing" by TR-1-2-3 + Additional graphical piping of open positions :**=============

**Full graphical pipelining of open positions for virtual TR and SL levels:**

An open trade will be subject to Partial closing % of the lot at 3 virtual levels: TR-1-2-3 (!)

**Full graphical pipelining of open positions for virtual TR and SL levels:**

|  |  |
| --- | --- |
|  | When clicking on the "individual panel" of an open position🡺 , reveal (hide) virtual levels of TR and SL (as on the screen⭠ ). Extend the background highlighting "in height" to the most extreme levels of TR and SL (!). In this case🡺 it doesn't matter WHICH the extreme levels of TR and SL will be (Real, or Virtual) == the background illumination should be extended to the MOST extreme levels (!). (background fill colors⭢ green = RGB 204, 236, 204 ; red = RGB 255, 204, 204 ).  At the moment of position OPENING - take TR and SL levels from the Settings *(in the future = from the Panel)*,  and AFTER the position is opened🡺 TR and SL == can be moved up/down (to memorize the distance from the Open position in case the Terminal is restarted).  **Caption all TR and SL level lines with🡺** TR-1-2-3 pips | Lot | Lot | Amount closing %  **When TR levels - SL triggered:**  - to fix them rigidly, without further possibility to move them higher/lower ;  - to supplement them  with the caption "Close", and to write the Sum: "+/- Sum" (color Green or Red (i.e. after triggering of the TR or SL level - the format of the text will look like this: "Close". and the Sum should be written: "+/- Sum" (color Green or Red)  (i.e. after triggering  of the TR or SL level - the text format will look like this :  TR-1 75p. 0.60 **+60$** (Close) , SL-1 35p. 0.30 **+25$** (Close) , SL-1 55p. 0.20 | **-25$** (Close) , |

*Number of virtual levels TR = 3 pcs.*

Distances of TR = levels are set in pips / points *(manually). By default for Euro-Dollar:* TR-1 = 50 , TR-2 = 150 , TR-3 = 300

At each level TR = set % lot closing from ... easier to show by example :

Lot on position at opening = 1.00   
TR-1 closes 60% , i.e. 0.60, lot balance = 0.40   
TR-2 closes 50% , i.e. 0.20, lot balance = 0.20   
TR-3 closes 50% , i.e. 0.10, lot balance = 0.10.

... at levels TR-1-2-3 write Lot closing % and the size of the Lot to be closed🡺 TR-1 75p | 60% | 0.60 | **+60$**

**(!) Make a check of lot balance for setting TR-2-3 levels:**After opening a trade⭢ automatically check = after partial closing (lot split) on TR-1 whether the lot is enough for split on TR-2 level (?!)   
If yes - then set TR-2 (!)   
then watch⭢ after lot split on TR-2 = whether the lot is enough for split on TR-3 level (?!) If yes = set TR-3 (!).   
... IF a trade is opened with LOT **>= 0.1,** then **mandatory** Min. lot balance on Position after split by TR-3 = **0.02 lot (!**).

in the Settings *(and then in the Panel)*🡺 parameters "Distance of TR-1-2-3 levels"🡺 affect only newly opened positions, and do not affect already opened positions (!!!), as their TR-1-2-3 levels can be moved manually above - below (!).

**For convenience of moving TR and SL levels above / below**🡺 level lines should be equipped with "balls" *(as on the screen above - in the Table)* to move TR and SL levels above or below (!).  
*(In the Market, the author of the original panel == made it so that the balls themselves could NOT be double-clicked, but could be grabbed and dragged up and down (!).*

**Step 5 - SL triggering torque :**

When the BID price on bar-0 breaks the virtual SL level⭢ we wait for bar-0 to close, and on bar-1 we look at Close-1 :

* IF Close-1 is "before" the SL level = then we do nothing (!),
* But IF Close-1 was "beyond" the SL level, and further than the "SL breakdown depth filter" parameter🡺 then close 100% of the lot (!) ;   
  \* Otherwise - If Close-1 was "beyond" the SL level, BUT closer than the "SL breakdown depth filter" parameter🡺 then do NOTHING (!).  
  *(write the corresponding log in the Journal)*

**Step 6 - Tral for virtual SL : - "Step".**

Start from : XX pips, (start trawling SL - when the price passes this distance) ;   
Distance : XX pips, (the distance of SL itself) ;   
Step: 8 bar (at the extremum of Bar-1. *If at the next trawl step = the extremum of Bar-1 will be LOWER than the extremum at the previous step, then we wait for the next trawl step (!).*

========= *Upon completion of this*⮥ *Step - please provide a demo sample for testing* =========

**Step 7 - Lock + Martingale**

**Preparatory work :**

1. Create a Function - "**Total amount of drawdown on the Working TF"** - to record all loss amounts received by Stop Loss in it
2. Its value should be displayed in the panel⭢ in the "Trade" tab.
3. Create "Auto-Martin" function = automatic calculation of lot size (XX) to cover the loss from all positions for N (250), pips *(output in Settings)* (!).
4. ... maximum lot size by Auto-Martin = "current "Dynamic Lot" x3" (this coefficient is adjusted manually⭢ in the Panel)   
   ( + display = how much it is in % of deposit), but no more than "Maximum Lot ÷ 5"

**LOCK :**

🗹 ... If any open position is **NOT FOLDED** by TR-1, and closed at Stop Loss == only THEN immediately open an "opposite" position with an increased lot by Martin:

**Martin :**

On the Working TF⭢ when closing a position by **Stop Loss** == look at the **amount of** closing == if the amount is **negative**, then🡺 this amount should be recorded in the "Total amount of drawdown..." and the next position should be opened with an increased lot by the value that should be calculated AUTOMATICALLY (Auto-Martin) (!) ,   
**(!!!) THAT LOT** *(increased by Auto-Martin)* **must be FIXED, i.e. it must not be disrupted when changing the lot in the Panel (!!!), and must not depend on the "Dynamic Lot" (!!!).**

IF there is a negative amount in the "Total Drawdown Amount", then in the Panel⭢ in the "Trade" tab⭢ near the Lots box = add the display of the Auto-Martin Lot with the label "⭧ Auto-Martin Lot".

when opening a new position = take Lot value from Auto-Martin (!)

For example: *... Buy closed at Stop-Loss in minus. Then the next Buy or Sell == will be opened with an increased lot according to the Auto-Martin, which is calculated automatically (!).*

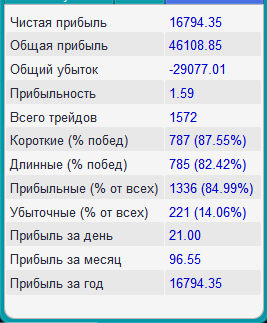
*If a position opened with an increased lot on Martin⭢ closes* ***PLUS,*** *then the chain of "Martins" is terminated (!), and new positions are opened with the normal lot (!!!).*

... If from the 1st time - the Total Loss Amount is NOT RECOVERED, i.e. some amount remains in the "Total Loss Amount" = then REPEAT the auto-calculation of the Lot for the next position *(i.e. the current Dynamic Lot + Martin auto-calculation)* that will be opened, but reduce the Lot value (calculated automatically) by x1.5 times.

... If after the 1st OR 2nd attempt⭢ any position (with ANY lot)🡺 closed in PLUS, and this amount overcame the drawdown , then the lot size of the next open positions return to the "normal value", Cycle **reset,** and watch the amounts on all already open positions (regardless of the lot size)🡺 when closing them in "-" at Stop Loss🡺 record the amount of drawdown and start the 1st cycle to overlap the drawdown (!).

... If there is a situation that during the 1st or 2nd drawdown overlap cycle == some positions are also closed in "-" by Stop Loss🡺 then add this amount to the drawdown and just continue the current drawdown overlap cycle (!).

========= *Upon completion of this***⮥** *Step - please provide a demo sample for testing* =========



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**Step 8 - Table of all accounting *(trade results)*⭢ in the Panel⭢ Info tab**

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To save time - instead of developing a New table with Trade Results (example )⭢

I assume that you already have some kind of ready-made trading results table (?!!!)

Therefore - please apply it - already ready, from your developments !

Because my Version of the Table (see below⭢ p. 15) is much larger (!).

Thank you. ☺

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**Example of My Version of the All Accounting Summary Table (*trading results)***

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Table with trade results (summary Accounting) :  
*Question:   
if the basis of the Expert Advisor == NOT MULTICURRENCY == is it possible to make the table "multi-currency", so that in the table to display the trading results from ALL copies of the Expert Advisor on other symbols (???!!!)   
... the Strategy itself is designed NOT for "multi-currencies" (???!!) ... the Trade settings depend on the Symbol, and on the TF (!),   
but in the Table I would like to see the TOTAL picture of trading on ALL symbols ... how to do it better (?!!).*

|  |  |  |  |
| --- | --- | --- | --- |
| Symbol, Worker TF | Basic Trading (Method #1) | Micro-trading (method #2) | Profit to loss ratio: +/- number  (per month) |
| Buy today, pcs. | + Amount ;  - Amount ;  ⧍ Delta (+/-) | + Amount ;  - Amount ;  ⧍ Delta (+/-) | = Amount (delta) / drawdown (% of deposit) |
| Sell today, pcs. | + Amount ;  - Amount ;  ⧍ Delta (+/-) | + Amount ;  - Amount ;  ⧍ Delta (+/-) | = Amount (delta) / drawdown (% of deposit) |
| Total : (sum of each Method for today) | online Amount / drawdown | online Amount / drawdown | = Today's total (⭫ % of deposit),  = Total drawdown for today (⭭ % of deposit) |
| Total for the month:  Total deals since the beginning of the month = X pcs: | Amount / drawdown | Amount / drawdown | = Total Amount per Month (⭫ % of deposit),  = Total drawdown for the Month (⭭ % of deposit) |
| Button Show / Hide Trade Calendar for the year\* | | | |

**Summary Table of trading results for ALL symbols (  
for all copies of EAs on other charts) (example from Market) : ⭢⭢⭢⭢⭢⭢⭢⭢**

\* "Calendar for the year" means = to display CREATIVE trade statistics for EVERY MONTH (with division of indicators by Method #1 and Method #2).   
To do this = at the end of each month = save the Trade Results in a FILE, and then in Calendar🡺 display these values for each month.