

Requirements Specifications for "Correlator©"

Original: 8 Feb Jan 2023

The logic entails using ANY instrument (e.g BTCUSD chart) offered by a broker as a Leading Instrument and trades to be placed on ANY Traded Instrument (e.g EURUSD chart) that the EA is applied to. By comparing e.g the last 2 bars for the same time on both instruments. Ensuring none of those bars on the Traded Instrument have touched the standard MT5 Indicator "Variable Index Dynamic Average". So on Longs the bars analysed must remain *Below*/not touch "Variable Index Dynamic Average". On Shorts the bars analysed must remain *Above*/not touch "Variable Index Dynamic Average". This VIDYA source code indicator is enclosed in the attached archive folder.

A pre-emptive approach to understand logic before coding executing requirements. You must be a world class professional programmer able to honour deadlines. You must present your understanding of this job via shared screen (within 3 days of being awarded it, after completion of first job on MQL5) on skype and be available to present each rule as done correctly and to speak as required and send screen shot videos as necessary. If developer can't the project will be withdrawn from that developer. No bugs must be present, however any errors/bugs will be listed as tasks on Trello.com (free PM online platform) board for you to communicate through. It's a requirement to check your own work against logic and to ensure it's bug free before any submission. Each submission must be accompanied by developer notes of what has been done (checked, confirmed, correctly). The goal is to have EA operational without bugs, functioning from 1 file, presented in 1 file (ex5, mq5) for ease for end user. If the below is acceptable and you can deliver according to this docs; I welcome your offer and progress. This project entails completing EA **Correlator©** from existing **TechMonegise©** MQ5 file supplied for reference only if developer wants to use similar elements already created. As many of the rules are already principally coded in this EA. If you read doc specs. You will see focus is NOT TechMonegise EA, it is only there for reference. Your focus is creation of new **Correlator©** EA as determined by requirements rules in pdf. The below Rules in requirements pdf are divided in Long side entry as numerical rules and Money Management as lettered rules. Then same for Short side entry defined separately in this document.

Price agreed is for full thorough testing (with proof of each bug/job done with video demo) by developer and correct bug free completion of this. Executing the below deems the developers acceptance of terms within this document. Ensuring no new bugs and that EA is light in terms of PC resource usage.

PAYMENT: After accurate complete ex5 EA file submitted, payment will be released a month later, then developer releases code. This is in case of bugs missed by developer! They will need correcting and re submission of ex5 file, which means month wait starts over.

Important Note:

I) **For reference purpose only** the supplied TechMonegise© EA is made up of 28 numerical signal rules and system rules in letters (A-F). Based on 26 indicators: Norbert 60 seconds (ADX), Volume Divergence Markers, Gap Finder 01 (same settings can be used for all GF Rules, so it can be listed in ea cross rule setting), VolumeMA, Tangoline_v1.2.mql4, PinbarDetector, MAB_TD_Sequential, iMA (Moving Average), PVT, Zone Trade_v2.4, Better Volume 1.4, Accumulation, CCwSF, AO Divergence, AIO Divergence (ATR), Bulls, ADX_Difference, Gator, FlashMove Divergence, Austin price direction, Moving Average, MACD, Bollinger bands, Stochastics, Price Speed, Price Direction indicator. These indicators must all be built in (internalised to EA, if they have not already been). Their source code has either already been, can be provided (some have been adapted). ALL are coded into EA supplied in attached zip.

Correlator© EA uses 1 indicator enclosed in archive folder. This means we have source for indicators. Therefore EA should not need any non standard indicators to be installed to platform. Any indicator bugs and their repair is part of fixing EA so it works as intended and is part of the agreed price for this whole job. This job to create **Correlator©** EA does not pay hourly rate, regardless of developer input. The agreed price is for correct, complete, functioning EA as specified in this document.

II) After assignment of this project to developer. A voice speak through (not text) on skype by developer with shared screen as needed to explain in their own words each rule/strategy and their suggestions. If this is not possible they should provide written summary of ALL rules. After 1st job completed, developer must be available through live call/shared screen and be able to make shared screen shot vids. This should pre-empt any mis-interpretation of the strategy rules and how they are programmed. Where text in this document has not been specific enough in detail and developer makes wrong assumption of requirement which makes the EA trade in an unintended manner. Then it is developers responsibility to make the correction as part of this job and it's price.

Project on basis that you can have "Private Use". But not for re creation (including re distribution, resale as EA, signals or code). All the exclusive creation, idea, copy rights to the ordered software assigned to the customer (personally and in reflected commercial entity i.e TechMoney Ltd). So no reference to developer and their contact details made on EA or in it's source code.

IV) Make it so that Strategy analyses for setup/ make entries according to TF's chart is displaying. Custom external Variables to be added to EA in green, with exact name in "inverted commas", with number after ":" that is the changeable value. Variables in EA should be organised/listed sequentially under sections titled with corresponding strategy rules specified in this document. E.g Rule 1 Variables, then Rule 2 Variables, etc. Any discussion should reference this document and EA variables must be same (if does not allow % then use *percent*) as in this document, e.g Variable "Max loss of open trades v bal <%"

V) Developer to provide bug free EX5 version of MQ5 EA with source code and back test on 2 different pairs on completion. This is requested as I sometimes have trouble doing back test.

VI) Developer to provide detailed manual explaining each Variable/value. In case in the future I need to re visit, add more features. Also to ensure developers interpretation/definition of Variables is correct.

VII) As part of price pre agreed for project; developer agrees up to an additional 10% features/changes not specified in requirements. So e.g if 7 rules exist for Long and it's Trade/Money Management, 1 additional rules allowed for existing set price to create EA.

VIII) All developers want to start from scratch. Here is interesting comment from one: "That will be more painful than making new one's. Your ea is using just a simple functions like in good old days of MQL. Modern approach is when you use OOP (structures, classes etc) so you don't need to repeat the code over and over again, declare hundreds of buffers for indicators etc. For example indicator can be done like in your ea - where each indicator has its buffers filed separately, or it can be created as a class, where class defines the internal buffers and function. Then a class can be initialised like a pointed in INIT function (something similar like "handle" in mt5) and you just use it inside the code. That shortens the code by 1000 lines in your ea & also makes the whole logic less buggy." Is this how you propose to do!?

IX) Detail of expert should include; placing all of the necessary checks, error description to be printed in Journal, restore normal operation after a connection failure, add a few attempts to open a position with an error, and maybe something else - at your discretion. All exceptions should be handled. Should work on all markets with different brokers on real account, with different EA's (therefore have Variable: "Magic Number": 999). Critical errors, such as NOT_ENOUGH_MONEY, ACCOUNT_IS_DISABLED etc., will off course immediately stop the operation. After non-critical errors (REQUOTE, TRADE_CONTEXT_IS_BUSY etc.) the EA will try again (I think, 5 attempts with 250 ms interval). Consider if e.g EURUSD is Trade Instrument on more than one chart but has different Lead Instrument on each chart on respective EA. Will each EA require different Magic Number? Note that EA will run on MT5 Hedge Acc.

X) EA structure no data leak causing high RAM/CPU usage. Reduce resource use to minimum.

XI) EA should be designed to easily add more entry/indicator forming rules.

XII) Each of the rules occurrence must be illustrated/stated in chart/journal markings. Along with an indicator which informs the state of rules in M5-H1 TFs, so useful info can be gleaned e.g 3rd consecutive rule 1 occurred at better price. Historic Rule signals must be displayed on chart and MUST NOT REPAINT.

XIII) EA must analyse according to Global variables listed in Rule D.

XIV) Optimize to lighten resource of EA. Ensure it will work on 25 pairs on each of 2 platforms on existing VPS. Including indicators recoding for recalculating all.

XV) Text Colour: Variables and their Values are in green text. Long section begins with blue heading. Short section begins with red heading. Rest of text is black. Check whole EA operates as stated in this document regardless of colour of text.

XVI) Misc:

-Note on platforms: mt5 is going to be a huge pain. I have found out few days ago why mt5 is so buggy, it has appeared that mt5 uses indicators asynchronously and in case of this ea imagine how big data leak may be.

-Ensure ALL reference to EA in Logs and their file names, on mouse arrow hover over signal on chart, in code etc to "Correlator©"

XVII) Fully test and debug EA. Provide instructions on how to change necessary variable values and license details from within source code then secure the .ex5 file so it can't be opened.

XVIII) EA must be Operationally resilient so does not depend on external factors for it's functioning, e.g download on historic data for Look Back Days (with the need to load historic data, i.e if platform has no historic data downloaded, EA should just look from point ea was loaded!? Otherwise specify auto download of historic data task) or Summer Winter GMT offset with broker. Should work without manual intervention of user.

XIX) Any indicator although none are used currently causing bug error must be fixed as part of the price agreed for this job.

XX) The goal of this job is to have EA functioning as intended without hanging, freezing, bugs. It must be reliably trust worthy to wrk on real acc. EA must be independent and operationally resilient, not relying on so many external factors and peculiar nuances. Developer must focus on this rather than amount of work or hrs put in.

XXI) Use <https://www.myfxbook.com/forex-market/correlation> to find above 95% correlating pairs in 30 min. Use EURJPY and USDJPY as Lead Instruments and their respective correlators as Trade Instruments in EA.

XXII) Ensure/test/show EA works on FX Choice and the list of following 10 broker <https://tradersunion.com/interesting-articles/top-10-best-forex-brokers-in-the-world/> on MT5, 4/5 digit quotes, on all account types e.g ECN, trading all on all spot (not futures) markets listed including FX, Stocks, Indices, Crypto, Metals and Commodities. Must work (in terms of risk/volume calculations and executions) on following account base currencies Bitcoin (BIT), USD, EURO, GBP, AUD, CAD, GOLD. TechMonegise© EA does all this except the latter 3 account base currencies.

Changes to this doc compared to last:

Changes to previous doc:

Long rules when:

1. Leading instrument:

When variable "Leading Instrument": **BTCUSD**. The EA must accept any instrument entered in this value as far as written in same way it is listed by broker. The value can be set up as a drop down menu with one to be selected.

Make Variable "Leading Instrument not touch VIMYA": **True/False**. So if True is selected, none of those price bars analysed on the "Leading Instrument" must touch the standard MT5 Indicator "Variable Index Dynamic Average" level. So their *lows* must be *above* VIMYA level throughout the bar duration.

On "Leading Instrument" going back 2 (as set in value) consecutive price bars (variable "Last no. of bars analysed": 2), *price* must have closed *higher* than open for each of the number of bars specified. Each bar must close *higher* than it's preceding one. The GMT times of the bars must correspond to be same as those being compared to from variable "Trade Instrument" (defined in rule 2). The TF (between M5-H1) is determined by that selected on the chart the EA is running on for the trailing instrument/chart which is to be known as variable "Trade Instrument". The broker times of the bars must correspond to/be same as those being compared to from variable "Trade Instrument". So if one market is closed (for the whole bar period) but the other open, no comparison is made for that duration!

2. Trade instrument:

If the above happens and Variable: "Trade Instrument": **EURUSD**. The EA should accept any instrument entered in this value as far as written in same way it is listed by broker. The value can be set up as a drop down menu with one to be selected.

Going back 2 consecutive price bars as the value entered in Variable: "Last no. of bars analysed": in rule 1, "Trade Instrument" *price* must have closed *lower* than open for each of the number of bars specified. Each bar must close *lower* than it's preceding one. The first chart in second chart in below image is "Leading Instrument", second chart is "Trade Instrument".



The broker times of the bars must correspond to be same as those being compared to from Variable: "Leading Instrument". The TF (between M5-H1) is determined by that selected on the chart the EA is running on for the Variable: "Trade Instrument". So in other words the comparison of rule 1 to rule 2 TF is determined by that selected in the chart on rule 2. The TF's compared and periods must always be same! So if one market is closed (for the whole bar period) but the other open, no comparison is made for that duration!

3. None of those price bars on the "Trade Instrument" must touch the standard MT5 Indicator "Variable Index Dynamic Average". So on longs, their *highs* must be *below* VIMYA level throughout the bar duration. A/E/F in below image are marked below price for Longs.



A. Rule A (this is called rule B in TechMonegise© EA):

In below scenario rule A appears on 3rd bar below (when hover over, it must supply price info it appears at) close price level of 2nd bar. Buy arrow shown @ Variable: "Buy enter better than A price by %" if it's value is 0.



Price bars used to determine either rule A, E, F must not be re used, so each price bar must only be counted once to determine either A, E, F. Entries can begin after A i.e the close price of the latest qualified price bar. Entry is invalidated if: an opposing rule A occurs or rule 2 occurs after A, E, F and before entry, or price has first gone into more than 0.2% profit from latest rule confirmation price (A). Variable: "Invalidating price move % from latest A": 0.2%. If hit, count for A would begin again.

Make Variable: "Buy enter better than A price by %": 0.5." Therefore if A price is 1.5000 long entry must be at 1.4925. If opposing rule 2 occurs after A and before entry, then entry is invalidated.

Have slippage allowed applied, so it keeps re trying entry as far as price spread/slippage below is satisfied and is same or better than A price. Variable: "Buy enter price increase for every 1% volatility": 0.15 %. This is relative to the default % value above variable. E.g So if Volatility (as defined in code in TechMonegise© EA) is 50%; $0.50\% + (49 \text{ [because it starts after the 1st percent]} \times 0.15\%) = 7.85\%$ is new value. This calculation principal applied to all the new volatility indicators.

Volatility is defined as: For the last 24hrs; It needs to calculate the high to the current price difference as a %. Then the low to the current price difference as a %. The greater % value is then used as the last 24 hrs volatility % threshold. E.g if current price is 100 and high of last 24 hrs is 105 (difference is 5%). If low of last 24 hrs is 90 (difference is 10%). Therefore 10% is the value used as the volatility for all variables using volatility to calculate in their formula.

Double check in TechMonegise EA that this indeed is how it is calculated!?

Volatility messages given if no other Check (Ba to Bh) Prevents Entry.

Variable: "Max Spread % allowed": 0.03%. So if price is 2.1000 then the max spread allowed for entry is 6.3 pips (63 points on 5 digit broker).

Variable: "Max Slippage points allowed": 2. Max Slippage allowed for entry would also be 0.2 pips (2 points).

Variable: "Max Spread % increase for every 1% volatility": 0.02 %. This is relative to the default % value above variable.

Variable: "Max Slippage % increase for every 1% volatility": 0.02 %. This is relative to the default % value above variable.

Create new (as this rule not in TechMonegise© EA) Variable: "Print rule A on chart": True/False.

Print in "messages" that this "Entry is from A".

B. (this is called rule C in TechMonegise© EA) Make Variable: "Hdn SL%": 0.45%. This executes at market so hidden from broker. Variable: "Fk SL": 0.5%. So this is a fixed fake SL simultaneously shown in order when opened. When exit occurs with this variable: "SL" appears in comment. This value must always be greater than that of Variable: "Hdn SL%". SL price calculated from each entry price. Make Variable: "Hdn SL": True/False. Risk size of entry should be 1% of free equity; use SL distance and Cb and Cc variable values to Calculate. Variable: "Risk % per order": 1%. Prevent new entries if B still valid but at least one of below occur (but resume if they don't occur):

Ba. If opposing A or rule 2 occurs after A, E, F and before entry, then entry is invalidated.

Bb. If new trades takes sum loss of account (Hdn SL, not trailing) of total open trades + trade trying to be opened over 15% value with Variable: "Max loss of open trades v bal < %": 15.

Bc. No new trades if new trades takes sum loss of account base currency (Hdn SL, not trailing) of total open trades + trade trying to be opened goes below Margin Level 600%. Make Variable: "Min Margin level %": 600. This dynamic value is seen on the MT4 platform.

Bd. Have Variable: "Max open entries per pair": 5. For both directions on all magic numbers on acc.

Be. Variables in B must be on whole acc. No exceptions to this rule. Regardless of Magic number or EA used.

Bf. Variable: "Invalidating price move % from latest A":

Bg. "Max Spread % allowed":

Bh. "Max Slippage points allowed":

Entry then attempted every new M1 bar in case of a failed entry, regardless of the Time Frame that the EA is put on. Messages in experts tab in platform print stating the first (only) of the Ba-Bh reasons that prevented entry. It only needs to be printed once in messages.

C. (this is called rule D in TechMonegise© EA) Exit trades profitably (after any cost of commission, spread and SWAP on trade) as follows with value of Variable: "Trail start %": 0.5 being calculated from entry price. So on a long if entry price is 1.5000, trail starts at 1.5075. Variable: "Trail Start increase for every 1% volatility": 0.1 %. This is relative to the default % value above variable. E.g So for 3% volatility (0.2% +0.5%= 0.7%). The SL follows market price up by 2x value of Variable: "Trail by %": 0.05. So this is the amount the trailing stop will be below market price as it moves into profit, it starts from 0.05% above trail start price then moves up in 2x increments of that value. Therefore to prevent loss, "Trail start %" value from start to entry must be larger than "Trail by %" value. All exit orders in C must execute at market so hidden from broker (stealth). Make so order never close at loss using "Trail by %", this is the method ALL profitable trades will close. Variable: "Trail By increase for every 1% volatility": 0.04 %. This is relative to the value of the source variable. Create new (as this rule not in TechMonegise© EA) Variable: Exit on opposing rule A once in profit by %: 0.1. Under this circumstance this is at least the amount it must exit by. This is only actioned when an open Long A is followed by an opposing Short A signal.

D. (this is called rule E in TechMonegise© EA) Global Variables;

- Variable: "Choose Trading Mode": It is currently in rule A TechMonegise© EA, with following 3 values:

Auto (EA works placing trades as already coded based on user entered values). Detailed "Disclaimer Warning" message appear with acceptance button before allowing EA to load. Change EA name.

Indicator (As already coded). No trade executions, just alert that A, E or F occurred, Future arrow's of entry Hdn SL, TP Trail Start marked by arrows for each trade signal.

User decides each trade. In this last option it works same as auto, but user must click pop up button accompanied by sound alert to place order or decline it, the pop up must state it is either of rule A, E or F. It must be accompanied by the message currently in that rule pop up. Order must only place at or better than the target entry price if all in B qualifies, otherwise placement of trade is rejected with reasons in B stated in on screen pop up.

- Variable: "Comment" field that user can fill in EA setting.

- Security license: As of EA v2.148, it's line 951 for Mql5. Line 749 for Mql4.

In those lines replace the already stated login details i.e "85636,342460,401147,8481545" either of the four with the login TBC permission to. Adjust Expiry date which is a couple lines below (957 in Mql5). Then allow use of cloud protector as per video to create that ex5 file to send to user. Specify new line numbers here.

- Variable: "No new entries between": 23-27 Dec. Only closure (according to rules) of existing trades on acc occurs between these low volume dates.

-Display dynamic spread on each chart in points and as % of price. E.g if price is 2.1000, Spread shown is 0.03% and 63 points.

- Variable "Safer weekend+": No new, close all. In this value no new trades should be opened on account from Fri 4pm GMT for rest of day, close all trades open on account when each in profit (by at least 0.10% after any cost of commission, spread and SWAP on trade) from 4pm GMT Fri, then close any unprofitable trades on account from Fri 8pm GMT.

No new, close profitable. In this value no new trades should be opened on account from Fri 6pm GMT for rest of day, close all trades open on account when each in profit (by at least 0.10% after any cost of commission, spread and SWAP on trade) from 7pm GMT Fri, allow unprofitable trades on account to trade as normal.

False. Safer weekend is off and EA trades same as any other time.

- Variable: "DrawDown_Calc_Rndom_Delay" system.

- o As part of Rule D. For proper calculation of Rule Bb.
- o If the EA with same preset was running on the same instrument, it could cause simultaneous entries without the possibility to take Rule Bb into account therefore exceeding the value.
- o Random Delay option introduced to tackle that. Insert seconds.

E. Create (as this rule not in TechMonegise© EA) Variable:

So this applies to a *second* occurrence of rule A which is at a *better/lower* price than the first occurrence and in same direction. Without opposing rule 2 or A's between the two Long A's. The count of this can have many scenarios and can be taken from the coded rule A in TechMonegise© EA. To be called rule E. The volatility variables and their values in rule A and C also apply to entries and exits in rule E. This rule will have its own variables such as Enter better than E price by %: 0.1, Risk% per order: 2, Fk SL%: 0.6, Hdn SL%: 0.5, Trail start%: 0.6, Trail By%: 0.05, variables. Create new (as this rule not in TechMonegise© EA) Variable: Exit on opposing rule E once in profit by %: 0.2. Under this circumstance this is at least the amount it must exit by. This is only actioned when an open Long E is followed by an opposing Short A signal.

Exceptions to entry stated in Ba-Bh apply to E! All calculated the same as current but with their own values that would apply exclusively to Rule E.

As seen below, rule E happens at a *better/lower* price than last complimenting direction A, without opposing A in between:



Create new (as this rule not in TechMonegise© EA) Variable: "Print rule E on chart": True/False.

Print in "messages" that this "Entry is from E".

F. Create (as this rule not in TechMonegise© EA) Variable:

So this applies to a *third* occurrence of rule A which is at a *better/lower* price than the second occurrence. Without opposing rule 2 or A's between the first to the last Long A's. The count of this can have many scenarios and can be taken from the coded rule A in TechMonegise© EA. To be called rule F. The volatility variables and their values in rule A and C also apply to entries and exits in rule F. This rule will have its own variables such as Enter better than F price by %: 0, Risk% per order: 3, Fk SL%: 0.7, Hdn SL%: 0.6, Trail start%: 1, Trail By%: 0.05, variables. Create new (as this rule not in TechMonegise© EA) Variable: Exit on opposing rule A once in profit by %: 0.3. Under this circumstance this is at least the amount it must exit by. This is only actioned when an open Long F is followed by an opposing Short A signal.

Exceptions to entry stated in Ba-Bh apply to E! All calculated the same as current but with their own values that would apply exclusively to Rule F.

Create new (as this rule not in TechMonegise© EA) Variable: "Print rule F on chart": True/False.
Print in "messages" that this "Entry is from F".



Short when:

1. Leading instrument:

When variable "Leading Instrument": **BTCUSD**. The EA must accept any instrument entered in this value as far as written in same way it is listed by broker. The value can be set up as a drop down menu with one to be selected.

Make Variable "Leading Instrument not touch VIMYA": **True/False**. So if True is selected, none of those price bars analysed on the "Leading Instrument" must touch the standard MT5 Indicator "Variable Index Dynamic Average" level. So their *highs* must be *above* VIMYA level throughout the bar duration.

On "Leading Instrument" going back 2 (as set in value) consecutive price bars (variable "Last no. of bars analysed": 2), *price* must have closed *lower* than open for each of the number of bars specified. Each bar must close *lower* than it's preceding one. The GMT times of the bars must correspond to be same as those being compared to from variable "Trade Instrument" (defined in rule 2). The TF (between M5-H1) is determined by that selected on the chart the EA is running on for the trailing instrument/chart which is to be known as variable "Trade Instrument". The broker times of the bars must correspond to/be same as those being compared to from variable "Trade Instrument". So if one market is closed (for the whole bar period) but the other open, no comparison is made for that duration!

2. Trade instrument:

If the above happens and Variable: "Trade Instrument": **EURUSD**. The EA should accept any instrument entered in this value as far as written in same way it is listed by broker. The value can be set up as a drop down menu with one to be selected.

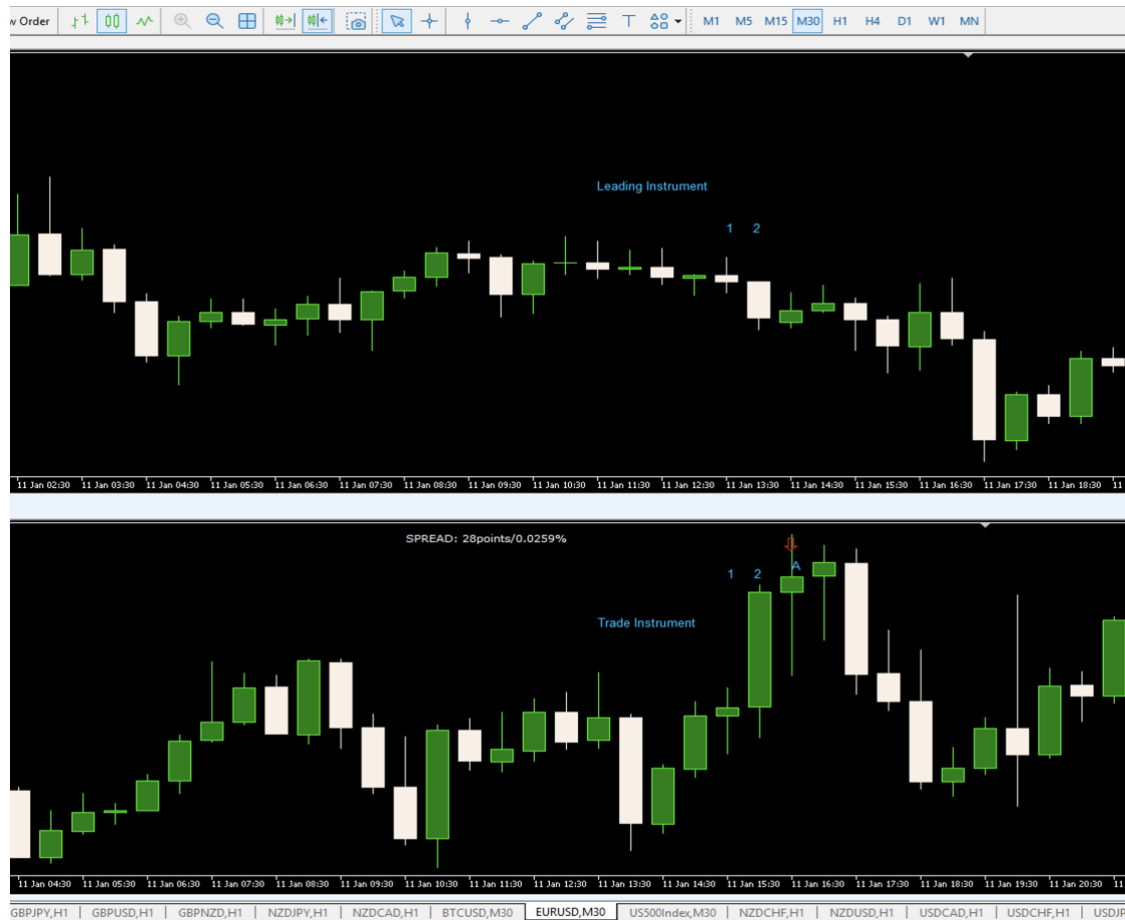
Going back 2 consecutive price bars as the value entered in Variable: "Last no. of bars analysed": in rule 1, "Trade Instrument" *price* must have closed *higher* than open for each of the number of bars specified. Each bar must close *higher* than it's preceding one. The first chart in second chart in below image is "Leading Instrument", second chart is "Trade Instrument". The broker times of the bars must correspond to be same as those being compared to from Variable: "Leading Instrument". The TF (between M5-H1) is determined by that selected on the chart the EA is running on for the Variable: "Trade Instrument". So in other words the comparison of rule 1 to rule 2 TF is determined by that selected in the chart on rule 2. The TF's compared and periods must always be same! So if one market is closed (for the whole bar period) but the other open, no comparison is made for that duration!

3. None of those price bars on the "Trade Instrument" must touch the standard MT5 Indicator "Variable Index Dynamic Average". So on shorts, their *lows* must be *above* VIMYA level throughout the bar duration. A/E/F in below image are marked below price for Longs.



A. Rule A (this is called rule B in TechMonegise© EA):

In below scenario rule A appears on 3rd bar below (when hover over, it must supply price info it appears at) close price level of 2nd bar. Sell arrow shown @ Variable: "Sell enter better than A price by %" if it's value is 0.



Price bars used to determine either rule A, E, H must not be re used, so each price bar must only be counted once to determine either A, E, F. Entries can begin after A i.e the close price of the latest qualified price bar. Entry is invalidated if: an opposing rule A occurs or price has first gone into more than 0.2% profit from latest rule confirmation price (A). Variable: "Invalidating price move % from latest A": 0.2%. If hit, count for A would begin again.

Make Variable: "Sell enter better than A price by %": 0.5." Therefore if A price is 1.5000 short entry must be at 1.5075. If opposing rule 2 occurs after A and before entry, then entry is invalidated.

Have slippage allowed applied, so it keeps re trying entry as far as price spread/slippage below is satisfied and is same or better than A price. Variable: "Sell enter price increase for every 1% volatility": 0.15 %. This is relative to the default % value above variable. E.g So if Volatility (as defined in code in TechMonegise© EA) is 20%; 0.5% + (19 [because it starts after the 1st percent] x 0.15%)= **3.35%** is new value. This calculation principal applied to all the new volatility indicators.

Volatility is defined as: For the last 24hrs; It needs to calculates the high to the current price difference as a %. Then the low to the current price difference as a %. The greater % value is then used as the last 24 hrs volatility % threshold. E.g if current price is 100 and high of last 24 hrs is 105 (difference is 5%). If low of last 24 hrs is 90 (difference is 10%). Therefore 10% is the value used as the volatility for all variables using volatility to calculate in their formula.

Double check in TechMonegise EA that this indeed is how it is calculated!?

Volatility messages given if no other Check (Ba to Bh) Prevents Entry.

Variable: "Max Spread % allowed": 0.03%. So if price is 2.1000 then the max spread allowed for entry is 6.3 pips (63 points on 5 digit broker).

Variable: "Max Slippage points allowed": 2. Max Slippage allowed for entry would also be 0.2 pips (2 points).

Variable: "Max Spread % increase for every 1% volatility": 0.02 %. This is relative to the default % value above variable.

Variable: "Max Slippage % increase for every 1% volatility": 0.02 %. This is relative to the default % value above variable.

Create new (as this rule not in TechMonegise© EA) Variable: "Print rule A on chart": True/False.

Print in "messages" that this "Entry is from A".

B. (this is called rule C in TechMonegise© EA) Make Variable: "Hdn SL%": 0.45%. This executes at market so hidden from broker. Variable: "Fk SL": 0.5%. So this is a fixed fake SL simultaneously shown in order when opened. When exit occurs with this variable: "SL" appears in comment. This value must always be greater than that of Variable: "Hdn SL%". SL price calculated from each entry price. Make Variable: "Hdn SL": True/False. Risk size of entry should be 1% of free equity; use SL distance and Cb and Cc variable values to Calculate. Variable: "Risk % per order:" 1%. Prevent new entries if B still valid but at least one of below occur (but resume if they don't occur):

Ba. If opposing A or rule 2 occurs after A, E, F and before entry, then entry is invalidated.

Bb. If new trades takes sum loss of account (Hdn SL, not trailing) of total open trades + trade trying to be opened over 15% value with Variable: "Max loss of open trades v bal < %": 15.

Bc. No new trades if new trades takes sum loss of account base currency (Hdn SL, not trailing) of total open trades + trade trying to be opened goes below Margin Level 600%. Make Variable: "Min Margin level %": 600. This dynamic value is seen on the MT4 platform.

Bd. Have Variable: "Max open entries per pair": 5. For both directions on all magic numbers on acc.

Be. Variables in B must be on whole acc. No exceptions to this rule. Regardless of Magic number or EA used.

Bf. Variable: "Invalidating price move % from latest A":

Bg. "Max Spread % allowed":

Bh. "Max Slippage points allowed":

Entry then attempted every new M1 bar in case of a failed entry, regardless of the Time Frame that the EA is put on. Messages in experts tab in platform print stating the first (only) of the Ba-Bh reasons that prevented entry. It only needs to be printed once in messages.

C. (this is called rule D in TechMonegise© EA) Exit trades profitably (after any cost of commission, spread and SWAP on trade) as follows with value of Variable: "Trail start %": 0.5 being calculated from entry price. So on a Short, if entry price is 1.5000, trail starts at 1.4925.

Variable: "Trail Start increase for every 1% volatility": 0.1 %. This is relative to the default % value above variable. E.g So for 3% volatility (0.2% + 0.5% = 0.7%). The SL follows market price *down* by 2x value of Variable: "Trail by %": 0.05. So this is the amount the trailing stop will be *above* market price as it moves into profit, it starts from 0.05% *below* trail start price then moves *down* in 2x increments of that value. Therefore to prevent loss, "Trail start %" value from start to entry must be larger than "Trail by %" value. All exit orders in C must execute at market so hidden from broker (stealth). Make so order never close at loss using "Trail by %", this is the method ALL profitable trades will close.

Variable: "Trail By increase for every 1% volatility": 0.04 %. This is relative to the value of the source variable. Create new (as this rule not in TechMonegise© EA) Variable: Exit on opposing rule A once in profit by %: 0.1. This is only actioned when an open A Short is followed by a Long A signal.

D. (this is called rule E in TechMonegise© EA) Global Variables;

- Variable: "Choose Trading Mode": It is currently in rule A TechMonegise© EA, with following 3 values:

Auto (EA works placing trades as already coded based on user entered values). Detailed "Disclaimer Warning" message appear with acceptance button before allowing EA to load. Change EA name.

Indicator (As already coded). No trade executions, just alert that A, E or F occurred, Future arrow's of entry Hdn SL, TP Trail Start marked by arrows for each trade signal.

User decides each trade. In this last option it works same as auto, but user must click pop up button accompanied by sound alert to *place* order or *decline* it, the pop up must state it is either of rule A, E or F. It must be accompanied by the message currently in that rule pop up. Order must only place at or better than the target entry price if all in B qualifies, otherwise placement of trade is rejected with reasons in B stated in on screen pop up.

- Variable: "Comment" field that user can fill in EA setting.

- Security license: As of EA v2.148, it's line 951 for Mql5. Line 749 for Mql4.

In those lines replace the already stated login details i.e "85636,342460,401147,8481545" either of the four with the login TBC permission to. Adjust Expiry date which is a couple lines below (957 in Mql5). Then allow use of cloud protector as per video to create that ex5 file to send to user. Specify new line numbers here.

- Variable: "No new entries between": 23-27 Dec. Only closure (according to rules) of existing trades on acc occurs between these low volume dates.

- Display dynamic spread on each chart in points and as % of price. E.g if price is 2.1000, Spread shown is 0.03% and 63 points.

- Variable "Safer weekend+": No new, close all. In this value no new trades should be opened on account from Fri 4pm GMT for rest of day, close all trades open on account when each in profit (by at least 0.10% after any cost of commission, spread and SWAP on trade) from 4pm GMT Fri, then close any unprofitable trades on account from Fri 8pm GMT.

No new, close profitable. In this value no new trades should be opened on account from Fri 6pm GMT for rest of day, close all trades open on account when each in profit (by at least 0.10% after any cost of commission, spread and SWAP on trade) from 7pm GMT Fri, allow unprofitable trades on account to trade as normal.

False. Safer weekend is off and EA trades same as any other time.

- Variable: "DrawDown_Calc_Rndom_Delay" system.

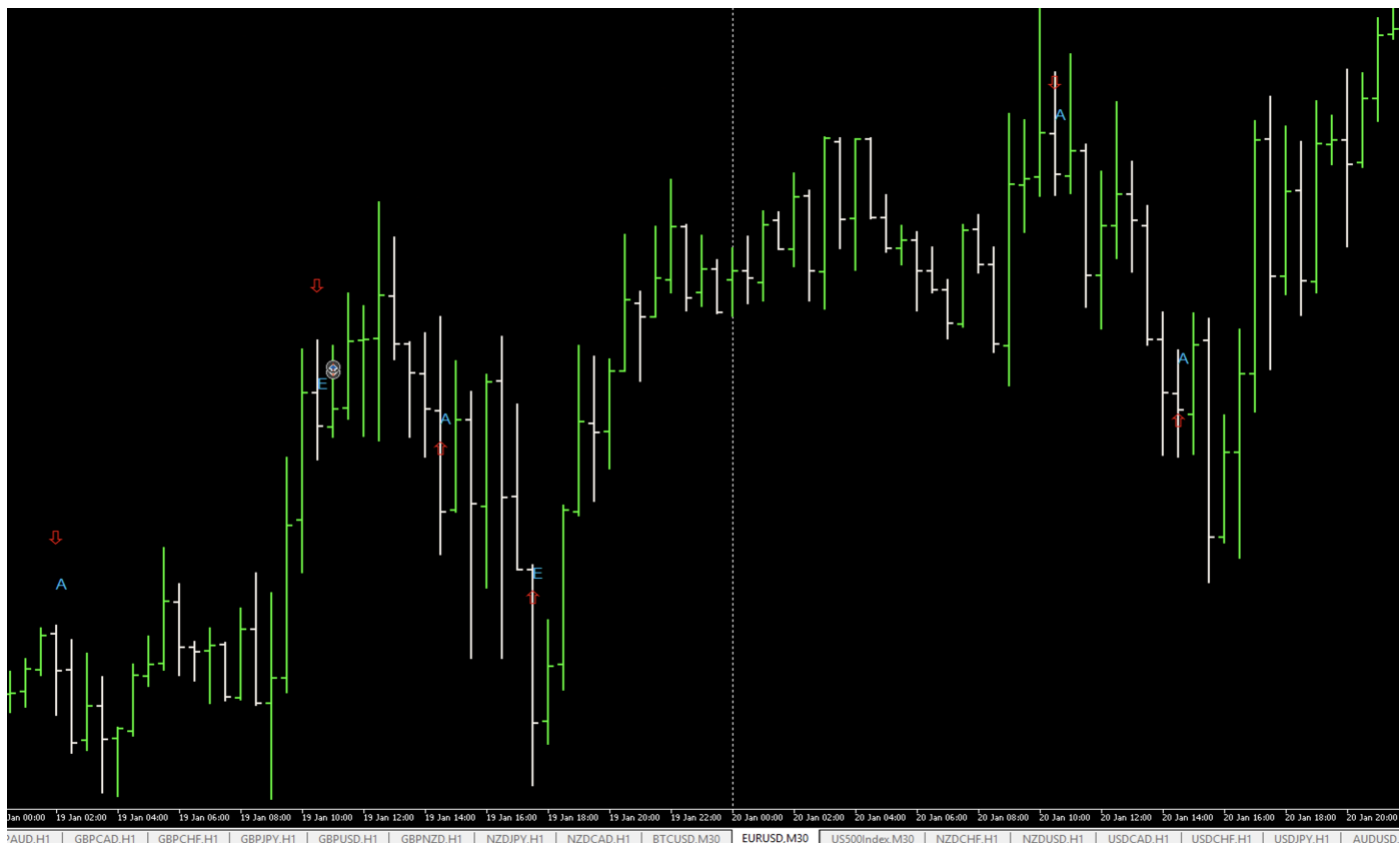
- o As part of Rule D. For proper calculation of Rule Bb.
- o If the EA with same preset was running on the same instrument, it could cause simultaneous entries without the possibility to take Rule Bb into account therefore exceeding the value.
- o Random Delay option introduced to tackle that. Insert seconds.

E. Create (as this rule not in TechMonegise© EA) Variable:

So this applies to a *second* occurrence of rule A which is at a *better/lower* price than the first occurrence and in same direction. Without opposing rule 2 or A's between the two Short A's. The count of this can have many scenarios and can be taken from the coded rule A in TechMonegise© EA. To be called rule E. This rule will have its own variables such as *Enter better than E price by %: 0.1, Risk% per order: 2, Fk SL%: 0.6, Hdn SL%: 0.5, Trail start%: 0.6, Trail By%: 0.05*, variables. Create new (as this rule not in TechMonegise© EA) Variable: *Exit on opposing rule A once in profit by %: 0.2*. Under this circumstance this is at least the amount it must exit by. This is only actioned when an open *Short E* is followed by an opposing *Long A* signal. An example of this occurring on the third signal on below image.

Exceptions to entry stated in Ba-Bh apply to E! All calculated the same as current but with their own values that would apply exclusively to Rule E.

As seen below, rule E happens at a *better/higher* price than last complimenting direction A, without opposing A in between:



Create new (as this rule not in TechMonegise© EA) Variable: *"Print rule E on chart": True/False.*

Print in "messages" that this "Entry is from E".

F. Create (as this rule not in TechMonegise© EA) Variable:

So this applies to a *third* occurrence of rule A which is at a *better/higher* price than the second occurrence. Without opposing rule 2 or A's between the first to the last Short A's. The count of this can have many scenarios and can be taken from the coded rule A in TechMonegise© EA. To be called rule F. This rule will have its own variables such as *Enter better than F price by %: 0, Risk% per order: 3, Fk SL%: 0.7, Hdn SL%: 0.6, Trail start%: 1, Trail By%: 0.05*, variables. Create new (as this rule not in TechMonegise© EA) Variable: *Exit on opposing rule A once in profit by %: 0.3*. Under this circumstance this is at least the amount it must exit by. This is only actioned when an open *Short F* is followed by an opposing *Long A* signal.

Exceptions to entry stated in Ba-Bh apply to E! All calculated the same as current but with their own values that would apply exclusively to Rule F.

Create new (as this rule not in TechMonegise© EA) Variable: *"Print rule F on chart": True/False.*

Print in "messages" that this "Entry is from F".