



USER GUIDE FOR:

MT4: Configurable Strategy Automator EA

MT4: Trade & Money Manager EA

(essentially manual only version of Strategy Automator)

MT5: Panel plus Configurable Automation EA

(MetaTrader 5 version of Strategy Automator)

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1 INTRODUCTION

This document covers how use the runwiseFX Configurable Strategy Automator EA that is available in the MetaTrader Market Place. For MetaTrader 5 this product is known as 'runwiseFX Panel plus Configurable Automation'. The manual also covers runwiseFX Money & Trade Manager EA, which is essentially a manual only version of our Strategy Automator EA.

Prefer to watch a video rather than reading the manual?

[Click Here](#) for a video version of the manual!

The non manual only versions allow trading rules to be automated, which are read from a text file as if you wrote them down on a piece of paper. The EA also provides full trade and money management features via an interactive control panel. The EA can also handle multiple accounts, where actions be replicated on multiple instances of MetaTrader for different accounts, on the same computer.

The EA can also be used in manual mode, providing a great manual trade panel with lots of essential features, such as hidden stop loss, scale-in and out, auto/trailing stop loss, hidden pending orders, news events and more.

Please ensure that you use the EA on demo account until you have familiarised yourself with its operation, in a variety of trading setups. If you have written your own rules then use strategy tester to test them thoroughly.

Link to the product on the MetaTrader Market Place:

MT4: <https://www.mql5.com/en/market/product/9602>

MT5: <https://www.mql5.com/en/market/product/18164>

Link to free demo that can be used on a regular chart (including video):

MT4: <https://www.mql5.com/en/market/product/10040>

MT5: <https://www.mql5.com/en/market/product/18165>

If you only wish to only use the EA for manual trading on MetaTrader 4 then we have a manual only version of the EA available, which is cheaper to buy than the full 'Automator' version:

<https://www.mql5.com/en/market/product/7570>

This manual can still be referred to for describing how to use the manual aspects of the EA.

1.1 Document Conventions

The following icons are used to throughout the document:



Take note – try to remember



Very important to take note of and remember - could cause undesirable results if ignored



Top tip – shortcut or other useful information that can make the system easier to use



Advanced feature/subject – can skip over when you are first learning how to use the system



Technical ‘behind the scenes’ detail that you don’t strictly need to know but maybe interested in

2 METATRADER 5 NOTES

If using the MetaTrader 5 version of our EA then we recommend under Options | Charts that you set 'Show trade level' drop-down to something other than 'Enable dragging of trade level'. The reason being is that if this is not done then the trade level lines can prevent button presses on the panel even though the panel is on top of the lines. This is a small bug in MetaTrader 5, which may be fixed in later releases.

3 UNDERSTANDING THE PANEL

In this section you will learn what all the controls do that are show on the EA's panel. Don't worry is not a scary as it looks ☺

News Events >>

Status Lines >>

Multi-Timeframe Trend
Indicator & Pips Moved >>

Controls per Direction >>

Configurable Rule Controls >>
(shown here are the
default supplied rules)



The control panel provides news events, status, indicator values and GUI controls for interacting with the EA. The main controls are repeated for each direction, i.e. SELL and BUY. This allows for flexible hedging if your broker supports hedging. There is also a Rule Controls section that allows you to interact with rules that have been configured. The rule controls shown above are the default rules that are supplied with the EA.

Changing position on chart of the EA panel: This can be done via Box_* EA inputs. Allows you to set corner and X,Y offset.

3.1 NEWS EVENTS

Useful when trading currency pairs and shows news events that are relevant to the two currencies. Shows time of news event which will change to count down closer to the event. Red events are high impact, yellow is medium and orange is low impact.



To get news events to show when you first use the EA you will need to add URL <https://cdn-nfs.forexfactory.net> via MetaTrader Tools menu | Options menu | Expert Advisors tab | 'Allow WebRequest for listed URL'. Simply tick the box and use the green + button to add the URL.

While you are there we also recommend adding <http://runwisefx.com> so you can download rules from our [rules library](#).

Don't forget you need to include the <http://> but do not add 'www.' to the URL - must be entered as shown above.

3.2 STAUS TEXT

The cyan colored status lines will report status for both the buy and sell direction. This includes the profit of any open trades and the status of any configured trading rules.

3.3 MULTI-TIMEFRAME TREND ARROWS

Shows the direction the market is moving in, for particular timeframes, using our built-in indicator. A solid arrow means direction is strong/confirmed, else hollow arrow is shown. The numbers are the pips that the market has moved in that direction, since the direction was signalled. If the marked as moved a lot of pips already then is shows that the trend might not last much longer.

See section 8

3.4 CONFIG BUTTON

Used to configure the EA. Please see section 5.

3.5 MANUAL TRADING BUTTONS

3.5.1 Trade Open (SELL/BUY – shown when trade not open)

The SELL and BUY buttons can be used to open a trade manually based on the lot size shown in the Lots text box. If no stop loss is set then the button will be colored orange and it will not be possible to open a trade in that direction. This can happen in auto stop loss mode (default) where the stop loss only calculates for the current direction the market is moving in.

The magic number (Expert ID) used for the trade is configured in the EA input **Important_magicNumberToUse** and is used by the EA to know which tickets is should manage.

Once a trade has been opened the corresponding SELL/BUY button is replaced by a Scale-In and a Close button.

3.5.2 Scale-In (only shown when trade open)

The Scale-In appears when a trade is open and allows additional tickets to be opened in the same direction, in order to add to the position. The size of the scale-in ticket is expressed as a percentage of the original trade, e.g. if the original lot size was 1 lot and Scale-In is pressed with 20% then an additional ticket will be opened of 0.2 lot size. To scale-in further then the percentage needs to be increased, i.e. 40% would open another 0.2 lots, in the example, creating a total of 40% extra scale-in.

Obviously, scaling-in adds to the risk relating to the trade if the stop loss is still in the original location.

3.5.3 Trade Close including Partial Close (only shown when trade open)

The close button also has a percentage setting associated with it. This is the percentage of the trade to be closed. 100% will completely close the trade and 50%

will close half the total trade size, i.e. it will scale-out 50%. Note, the total position will include any scaled-in tickets.



To progressively scale-out of the trade the close percentage will need to be increased, i.e. it is the percentage of the original trade that was opened rather than what is left open.

3.6 MONEY MANAGEMENT (Risk:/Lot:)

The EA will calculate the lot size for you based on the percentage of your account balance (or equity – whichever is lower) you wish to risk. The percentage should be entered in the Risk text box and can also be selected via the pop-up, which is activated by pressing the ▼ button. You can also enter a fixed amount of the account currency by simply typing the amount in and omitting the % sign.



The pips at risk that is used for the lot size calculation comes from the current position of the hidden stop loss line (yellow) and the current price.

To manually enter a lot size, simply clear the Risk text box and enter the required lots value into the Lots text box.

3.7 AUTO MODE SELECTION (Auto Mode:)

The following modes are available that relate to the level of automation of the EA. Essentially, it allows you to tell the EA what you to do when the configured rules issue a trade command, such as TRADE_OPEN, SCALE_IN or TRADE_CLOSE, etc. This allows you switch (say) from the rules to just alerting you, to actually taking the trade automatically. If taking the trade, this can be as a one-off (semi-automatic) and continuously (fully automatic) as each fresh trades signal arise.

| | |
|-------------------|---|
| <p>MAN</p> | <p>Manual Mode. This turns off the rules engine for when ticks coming in from the market or on regular time intervals. However, rules can still be executed on 'script basis', i.e. executed when a user configured button is pressed. Note, does not affect stop loss, pending orders and take profit.</p> <div data-bbox="408 1480 564 1603"> </div> <p>MAN mode is for purely manual trading. Only use MAN if you <u>don't</u> want to do automatic alerting/trading in <u>either</u> direction. Use EVL mode if don't want to alert/trade at the moment but may want to later on, or in other direction. This is so the EA can keep track of whether the market is in the buy or sell situation, which it can't do if you turn off rules via MAN mode.</p> |
|-------------------|---|

| | |
|------------|--|
| EVL | <p>Evaluate Mode. Rules are evaluated on incoming price ticks and regular intervals. However, TRADE_OPEN, SCALE_IN, and TRADE_CLOSE commands will be ignored, in terms of raising alerts or opening/closing trades. However, the alert lines will still be set on the chart.</p> <p>This mode is useful for semi-automatic trading, where don't want alert/trade at the moment but may do later. With this mode the EA can still keep track of the market, so when you do enable alerting/trading it knows where it is up to.</p> <p>Note, if a rule uses the FORCE_CLOSE command then this can still cause the trade to be closed unless in MAN mode. Rules should only use FORCE_CLOSE if there is a tick box placed on the control panel that can be used to turn this behaviour off.</p> <div>  <p>EVL mode is the mode to select when you don't want the EA to alert/trade a particular direction – but may do later or have enabled alert/trade in other direction.</p> </div> |
| ALT | <p>Alert Mode. Any TRADE_OPEN and SCALE_IN, TRADE_CLOSE commands will result in an alert but won't actually open/close trades. Note, the alert will only new move, e.g. was buy but now rules are signalling for a sell. Note, if any rule issues a FORCE_CLOSE issued command issued by a rule will still close the trade.</p> |
| PND | <p>Pending Mode. Will setup a pending order when TRADE_OPEN is issued by a rule. The pending order will be offset from the market price by Main_pendingOffsetOnSignalPips EA input. Note, it is also possible to configure a text box on the control panel to supply this value instead. Just needs to be named rwfxPendOffset.</p> |
| TOE | <p>Trade Once then Evaluate Mode. This will act up on TRADE_OPEN SCALE_IN and TRADE_CLOSE (and FORCE_CLOSE) commands but after trade closed the mode will switch to EVL. This can be used to authorise the EA to do a one-off action, which we refer to as semi-automatic. If you wanted it to take future trades (say) then you would need to set back to TOE (say).</p> |
| TOA | <p>Similar TOE but after trade close the mode will be switched to ALT.</p> |
| TC | <p>Trade Continuous Mode. This will act up on TRADE_OPEN and, SCALE_IN, TRADE_CLOSE commands and keep doing so.</p> <div>  <p>It is important that you test your rules well before this mode is selected, which we refer to as automatic.</p> </div> |

3.8 SL Mode (SL:)

By default the EA will calculate the stop loss automatically (AUTO) by using the configured stop loss calculation method. Other values can be selected as follows:

| | |
|---------------|---|
| OFF | Turns off stop loss. Can be used to remove unnecessary lines from the chart. |
| AUTO | Automatic. Uses configured stop loss calculation method to set the stop loss. |
| RULE | Set by rules. Allows rules to set the stop loss using the SET_HIDDEN_SL command. |
| MAN | Manual. Allows the stop loss to be set by manually moving the line on the chart. |
| SGNL | Reserved for use with our signal service |
| n Pips | <p>Simple linear stop loss based on the selected number of pips from the current bid price.</p> <p>★★★★★ top tip The list of pips from current price can be configured by the Main_selectionSLmodePips EA input property.</p> |

3.9 Trailing Stop Loss (Trail tick box)

If the **Trail** tick box is ticked then the stop loss will trail as the market price moves in your favour, after a trade has been open. The stop loss mode will be referenced to give the pips distance from the market price to the stop loss trailed price.



The trail mode won't ever set the stop loss to be further away, regardless of settings. Therefore, if you were trailing by 10 pips but then selected 20 pips, you would need to move the stop loss further away manually. This is a safety feature as an increased stop loss could potentially increase risk.



The trailing normally happens as the market price moves in your favour. However, the EA input **Main_stopLossCalcOnClosePrice** can be set to trail based on the candle close price. By default, the period of the closed candles is the chart that the EA is running on. However, you can force a particular period via the optional Period panel setting (see **Error! Reference source not found.**).



★★★★★ **top tip** Tailing with AUTO mode is great to capture profit over a number of candles as in automatic mode it gives the trade some breathing room to begin with before the stop loss starts to move. Even then the stop only moves significantly after candle close. However, if you wish to the trailing stop to capture profit of the current live candle or previously

closed candle then a set number of pips from bid price would be better, as it works faster.

3.10 HIDDEN TAKE PROFIT (TP BUTTON)

The TP button allows you edit the take profit levels on the fly. When you press the TP button the following pop-up is shown. Use the **OK** button to make any changes, or **Cancel** or ☒ button if you change your mind and don't want to make the changes.



The take profit pop-up shows the settings for each of the tp levels, plus a master on/off control.

3.10.1 MASTER Tick Box

If this is unticked then the hidden take profit feature/levels will be switched off.

3.10.2 Auto Ratio

If ticked then the take profit target is set automatically based on the risk reward specified next to the tick box (or pips). If unticked then the target can be set manually by moving the line on the chart.

3.10.3 Exit %

If ticked this will perform the partial close of the trade using the percentage of the trade to close shown with the tick box, when the target price is reached. If 100% is selected then this will close the entire trade. If 0 or the box is unticked then no close will take place.

If you specify a negative percentage then when the target is reached the trade will scale-in by that percentage (non negative), i.e. add to your position.

3.10.4 Stop Loss Adjustment (SL:)

If set then will adjust the stop loss mode when the profit target is reached. This can be used, for example, to narrow the stop loss to a certain number of pips. If RAISE is selected then will raise the stop loss to the previous target, or break even in the case of target 1. If RAISE-OC is selected then does RAISE functionality but only if close price reaches the take profit level. Note, if RAISE-OC is selected then the exit % and other settings will also only happen on close price reaching the level.

3.10.5 Break Even (BkEven tick box)

If set then will set for break even when profit target is reached.

3.10.6 Trail (tick box)

If set then set for trailing stop loss when the profit target is reached.

★★★★★

**top
tip**

It's perfectly fine to have the exit % as 0 but still use the profit target to adjust the stop loss or set for break even. Best to think of the hidden take profit as take action when profit target is reached. Note, if the MASTER tick box is unticked then no action will be taken when the targets are reached.

3.11 HIDDEN PENDING ORDERS (Pending:)

In addition to hidden stop loss and take profit, the EA also supports hidden pending orders. The reason for using hidden pending orders is so that broker isn't tempted to nudge the price/spread to trigger your broker pending order when they believe the market isn't favourable. Hidden pending orders also allow extra capabilities such as only alerting or only trading if candle closes above/below line.

To set a hidden pending order, simply select appropriate pending order from the **Pending:** selection list. After selected the pending line on the chart that can then be moved to the desired price. The mode will automatically change between Pending Limit and Pending Stop depending which side of the current price you place the line.

The EA can either open a trade or alert when the target price is reached and can do this depending on price reaching line or candle close reaching line. This is controlled by what you select from the **Pending:** list.

3.11.1 Automatic Scale-In on Price Reached

The EA can be set to automatically scale-in when a target price is reached on an open trade. Simply set a pending line as you would normally (previous section) and this will place a 'pending scale-in' line on the chart that can be positioned to the desired price. When that price is reached the EA will either alert or perform the scale-in, depending on what was selected from the **Pend:** list. The scale-in in percentage is that which is shown next to the manual Scale-In button. Essentially, it's like the EA presses the Scale-In button for you when the pending scale-in price is reached.

3.12 BREAK EVEN (BkEven tick box)

The 'Breakeven' tick box can be used to set a trade for breakeven where the trade will be exited when the price comes back to its open price. If you change your mind whilst the trade is still open, simply untick the breakeven checkbox. Note, if you tick the box when a trade is not in profit then will close the trade if trades improves and comes back to the open price.

3.13 RULE CONTROLS

This is configurable if you have the non-manual version of our EA. It provides controls that can be used to control the behaviour of any configured trading rules. By default, the controls for our supplied built-in rules are shown – see section 8 on how

to use those. See section **Error! Reference source not found.** on how to download rules from our online library.

4 LINES SHOWN ON CHART

4.1 Yellow Hidden Stop Loss Line (hsl)

The hidden stop loss is shown by a yellow dashed line on the chart, labelled **hsl**. This label will also indicate the number of pips from current bid price, or open price if a trade is open, and if trailing mode has been enabled. The hidden stop loss is used as the basis for calculating the risk pips, which is in turn is used to calculate the lot size based on the specified risk.



The hidden stop loss, pending lines and take profit all work on the bid price. This prevents these items from being triggered by spikes in the ask price, which could come from broker manipulation as the ask price is not shown on the charts or in the history. The bid price is also the price shown by the candles, so it means you do not have to account for the spread when setting lines from what you see on the chart including indicators that are calculated from the candle prices e.g. moving averages.



When you open a trade the EA will also set the broker stop loss, which is deliberately further away than the hidden/actual level. This is so your broker doesn't know where your true stop loss is. Remember your broker is not your friend and you should hide as much as possible from them. See our video if you want to know why:

<https://www.youtube.com/watch?v=hWVNYWEVG9A~>

The addition offset from hidden level is controlled by EA input Main_brokerStopLossExtraPips

4.2 Cyan Hidden Take Profit Lines (htp)

The hidden take profit lines are shown as cyan dashed lines on the chart, labelled **htp**. This label will also indicate the number of pips from current bid price (or open price when trade is open) and the auto risk reward (rr) setting if set.

By default four lines are shown (configurable) that permit the trade to be scaled out.



When you open a trade the EA will also set the broker take profit, which is deliberately further away than the hidden/actual level 100% exit level. The addition offset from hidden level is controlled by EA input Main_brokerTakeProfitExtraPips

4.3 Red/Green Support & Resistance Lines (S1-3,R1-3)

These show daily support & resistance lines. The market can often reverse around these lines so can be good place set take profits, e.g. partial, and break even.

4.4 Brown/Cream Pivot Lines (* Pivot)

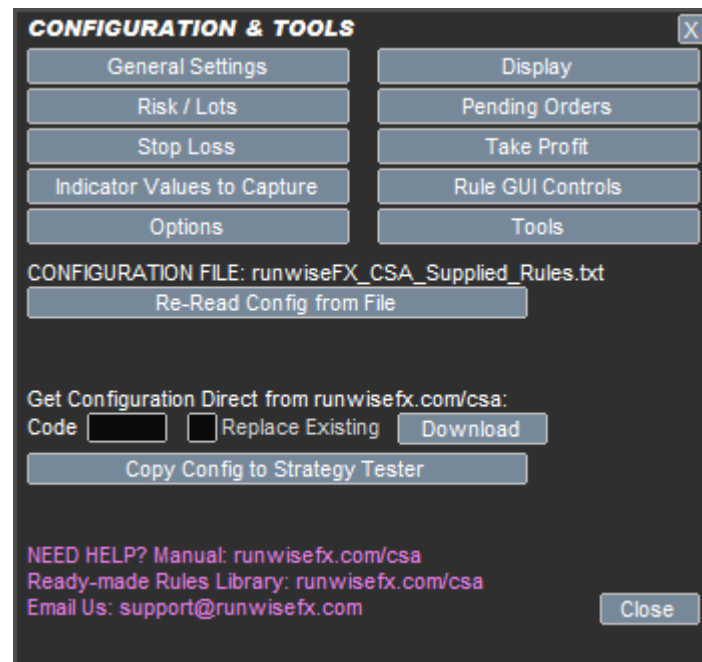
Daily, weekly and monthly pivot lines are calculated shown. Again the price can bounce off these lines and may not 'break through'. Good idea not open trade in same direction as market if price close to one of the these lines, as price may reverse.

5 CONFIGURING THE EA

With version 6+ of our EA it is now possible to configure the EA using pop-up forms, available when you press the COFIG button. This makes the EA much easier to configure than the old way of using endless EA inputs!

5.1 Main Config Pop-up

Pressing the CONFIG button shows the main pop-up that allows the various areas of the system to be configured and to also download rules from our [library](https://runwisefx.com/csa):



5.1.1 Re-Read Config from File Button

This will re-read configuration, which is stored in a file, into the memory of the EA. However, this button doesn't normally need to be pressed, as by default, the EA will automatically re-read the file if it detect a date/time change on the file.

The filename of the configuration file is shown above the button and is store in the MQL4\files folder of your MetaTrader Data Folder (or MQL5\files in MetaTrader 5).



It is possible to have different configuration files and switch between them, both in terms of reading and writing, via EA input Main_configFileName. This can even come from a special common folder that is accessible by all MetaTrader instances installed on you computer, when EA input Main_configInCommonFolder is set true.

5.1.2 Downloading Configuration/Trading Rules from Our Library

Ready-made rules can easily be loaded into your EA from our rules library webpage: runwisefx.com/csa.

To load rules you will need to have added **http://ruwnisefx.com** to the list of URLs that the EA can access via Tools | Options | Expert Advisors tab | 'Allow WebRequest for listed URL'. This only needs to be done once.

Enter the quick load code, shown in the library (right column) in the '**Code**' text box and press the **Download** button. Click OK in the Confirm the download message box.

The tick box **Replace Existing** can be ticked to replace any rules are already configured, such as the built-in rules that EA ships with. This is recommended if downloading rules that perform an automatic entry if other entry rules are already loaded.



Our library also contains the supplied rules that EA ships with, in case you want to re-add later. You'll see them at the bottom of the library.

5.1.3 Copy Config to Strategy Tester Button

The EA's configuration file can't be directly read when using the EA in the MetaTrader Strategy Tester Tool. However, this button will copy the current configuration into a special common folder that can be accessed by the Strategy Tester when the next test is run.

Click this button when you are happy with your configuration and wish to try out in the Strategy Tester.



When using the Strategy Tester the EA's configuration file is read/written from/to folder **tester\files**, in your MetaTrader Data Folder, as MQL4\files cannot be accessed by the Strategy Tester. In MetaTrader 5 the location of tester\files varies, so recommend using Copy Config to Strategy Tester button.

5.2 General Settings

Allows general/main settings of the EA to be changed via the following pop-up form:

5.2.1 Default Auto Mode

Sets the auto mode that is shown on panel on start-up and after trade closed. See section 3.7 for an explanation of what the modes do.

5.2.2 Trade Comment

The trade comment that is used when trades are placed on MetaTrader and is shown in the comment tab of the Terminal frame in MetaTrader. If using a Binary Options broker then specifies the expiry time for the order. See section 15 for more details.

5.2.3 Multi Account

Can be used to place the EA in multiple account mode where manual trades and adjustments can be automatically copied to slave accounts on other MetaTrader instances on the same computer. See section 12 for more details.

5.2.4 Magic Num[ber]

Specifies the magic number, as known as the Expert ID, that the EA will use for trades that it manages.

5.2.5 Max Simultaneous Trades

This allows additional magic numbers to be allocated that allows multiple trades in the same direction on the same symbol to be managed, i.e. with separate stop loss / take profit. This includes having multiple hidden pending orders in the same direction/symbol.

Enter the number of additional trades/pending orders you want to permit on the same symbol/direction. If greater than 0 then this places the EA in multi-trade mode, see section 6.

5.2.6 ALERTS

Allows you specify what should be done when the EA wishes to raise an alert. Can select between alert pop-up box in MetaTrader (and sound), email and/or notification, i.e. send to a configured mobile.

5.2.7 TRADING HOURS

Allows you to select the trading hours that any configured rules are allowed to open trades for. Possible to specify two start and ends so can say configure a morning session and afternoon session. Note, the EA will not close a trade already open based on these times – it just relates to opening a new trade.

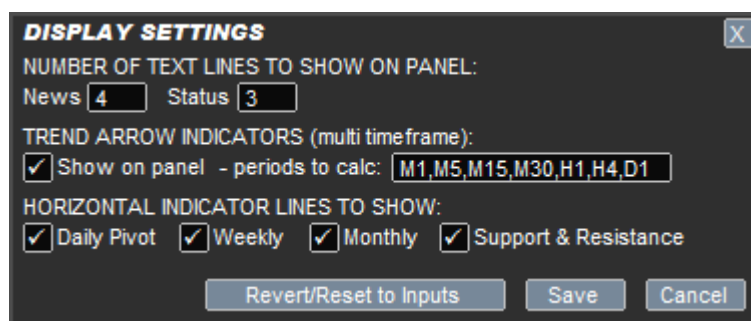
The Friday Reduce allows the end time to be adjusted down on Fridays. This is useful as a lot of traders don't like to open new trades close to the weekend market close.

5.2.8 Revert/Save/Cancel Buttons

This pop-up form and others have these buttons. The Revert will remove configuration for the form from the configuration file and revert to what is configured in the EA inputs. The Save button will save any changes to the configuration file and Cancel will close the form without doing a save.

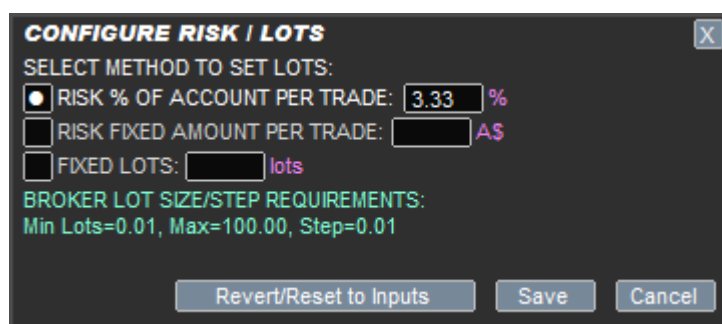
Note, when the Save button is pressed it will trigger a re-read of the configuration file, which will also, by default, be performed by other instances of the EA, when they detect a date/time change in the file modification timestamp.

5.3 Display Settings



Allows you to remove/size various items that the EA shows on the chart.

5.4 Configure Risk / Lots

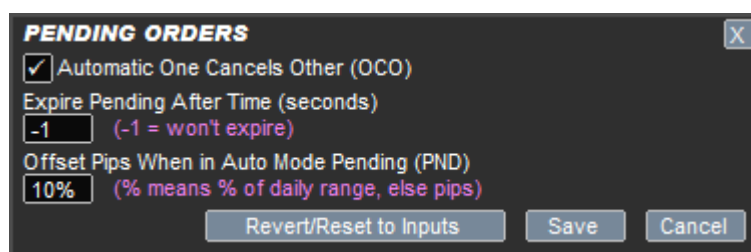


Allows you specify the default trade position size method, i.e. lots to use.

Use radio button style selection list to select between % of account to risk per trade, a fixed amount of account currency per trade, or fixed lots. Don't forget these are just defaults and can still be changed on the panel/chart.

Your broker's lot size requirements are also shown, so you know what is possible, where step is the smallest increment allowed in lot size.

5.5 Pending Orders



Allows options relating to the EA's hidden pending order functionality to be changed.

The Automatic One Cancels Other means that is you get both a sell and buy pending order that as soon as one is triggered the other will be deleted/cancelled. Expire Pending allows pending orders to be automatically delete/cancelled if not taken with the specified time (in seconds). The Offset Pips is used for Auto Mode of PND which will set a pending order instead of immediately opening a trade when the configured trading rules signal. This setting gives the amount of pips offset that is used for the pending order based on market price at time of signal. As with other places where you can specify pips, a % can be added which will use the specified % of the average daily range of the symbol.

5.6 Configure Stop Loss

CONFIGURE STOP LOSS

SELECT DEFAULT STOP LOSS:

☒ AUTOMATIC:

| Calculation Method | Min | Max | Offset |
|--------------------|-----|------|--------|
| Standard | 5% | 100% | 0 |

(% means percentage of average daily range)

☐ FIXED PIPS:

☐ MANUAL - initial pips: 15

☐ RULE (from configured trading rules - if set)

☐ OFF (no stop loss)

STOP LOSS OPTIONS:

☐ Trail stop loss on by default

Revert/Reset to Inputs Save Cancel

Allows default stop loss mode to selected, using radio button style selection list.

5.7 Automatic SL

This will instruct the EA to calculate the stop loss based on price action and a selected calculation method. The calculated value also be contained between a min and max pips (or % of daily range), or left blank to not do that. This min/max is useful as sometimes calculated values can be uncomfortably shallow or too big. The offset will add additional pips to the calculated value, prior to min/max trim, as many traders like to add a pip or two wriggle room.

5.8 Configure Take Profit

CONFIGURE TAKE PROFIT

NUMBER OF TAKE PROFIT LEVELS / TARGETS: 4

| TARGET 1: | TARGET 2: | TARGET 3: | TARGET 4: |
|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 1.0 rrr | 2.0 rrr | 3.0 rrr | 4.0 rrr |
| Action on Hit: | Action on Hit: | Action on Hit: | Action on Hit: |
| Exit %: 25 | Exit %: 50 | Exit %: 75 | Exit %: 100 |
| SL: [empty] | SL: [empty] | SL: [empty] | SL: [empty] |
| <input type="checkbox"/> Trail SL | <input type="checkbox"/> Trail SL | <input type="checkbox"/> Trail SL | <input type="checkbox"/> Trail SL |
| <input type="checkbox"/> Break Even | <input type="checkbox"/> Break Even | <input type="checkbox"/> Break Even | <input type="checkbox"/> Break Even |

Revert/Reset to Inputs Save Cancel

Allows default take profit regime to be configured, including number of take profit levels. Note, it is possible that take profit level doesn't actually exit the trade in, but is used to adjust stop loss, set for break even and/or set for trail stop loss. Best to think of 'take profit' as 'take action' when target price is reached.

The target price can be expressed both as Risk Reward Ratio (RRR) or in pips.



Advanced stop loss adjusts are supported, where if set SL: box to -5 (say) will reduce stop loss by 5 pips when target is reached. Or, if set to -5% will reduce stop loss by 5% of Average Daily Range when target reached.

5.9 Indicator Values to Capture

INDICATOR VALUES TO CAPTURE

Reference ID

Indicator Name Indicator Inputs/Properties

e.g. MarketADX arrow

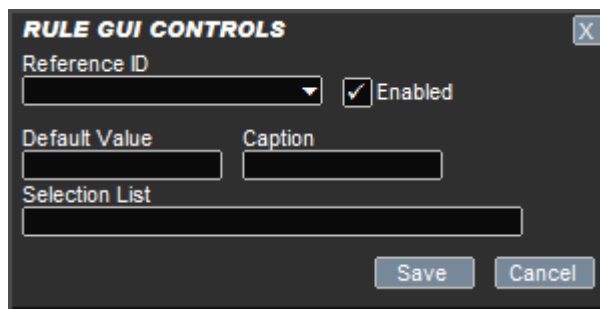
Period Shift Color Index Null Value Interpretation Method

0 1 [empty] AUTO A

Save Cancel

Can be used to change details of indicators that have been configured to be captured as part of the trading rules. This allows the inputs, period (timeframe), etc., to be changed. Use Reference ID to select which input to change. Note, period of 0 means current timeframe. Shift 1 means candle most recently closed and shift 0 is live candle.

5.10 Rule GUI Controls



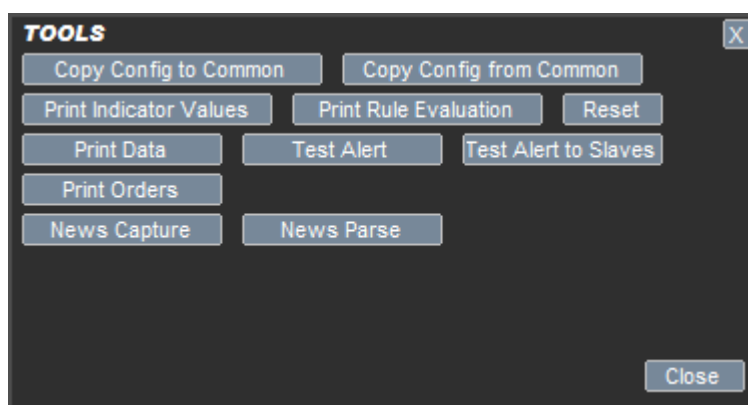
Allows any configured Rule GUI (Graphical User Interface) Controls to be altered, e.g. to change default value. These are the controls that appear in the 'Rule Controls' at the bottom of the EA's panel. Use Reference ID to select the control you wish to amend.

5.11 Options



Allows various options to be changed which relates to how the EA works. If you tick 'allow configuration per symbol/period' then Symbol and Period will appear in main CONFIG button pop-up where you can specify the Symbol and/or Period that any proceeding configuration changes relate to. This allows you, for example, to have a different stop loss for a particular timeframe.

5.12 Tools



Contains various tools that you won't normally need to use, but may be asked by us to use, e.g. to help diagnose a problem (say).

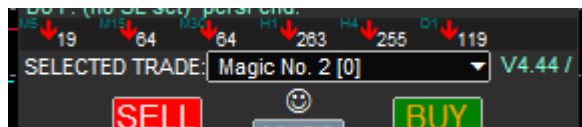
6 MULTI-TRADE MODE

The EA can be configured to operate in a 'multi-trade' mode, where it can manage multiple trades/pending orders for the same symbol and direction (buy/sell). Each trade/pending order can have its own stop loss and take profit settings and operate independently. [This is in contrast to opening additional tickets by Scaling-In, where the same stop loss and take profit is used for all scaled-in tickets.] Each trade will have a separate Magic Number (Expert ID), so the EA can keep track of which stop loss / take profit relates to which open ticket.

Note, you can still scale-in in multi-trade mode, where the additional tickets will have the same magic number as the trade they relate too.

To configure multi-trade mode click CONFIG button | General Settings button and enter max number of trades/pending orders you want to permit for a given symbol/direction in the 'Max Simultaneous Trades' box.

In multi-trade mode a 'Selected Trade' selection box appears on the panel that allows you to select which trade you wish to manage via panel and lines on chart. For example to change the stop loss for Magic Number 3 then select it first with Selected Trade and then use the control panel/line on chart to adjust the stop loss. Note, as always, moving a stop loss line on the chart will only work if SL mode is set to MAN.



Selected Trade selection box

Note, the Rule Controls by default are not specific to selected trade, i.e. relate to all trades. However, they can be configured to be. This is done on a per control basis.



The dreaded FIFO rule: If you live in the US or use MetaTrader 5 (with netting type account) then the FIFO rule can get in the way of being able to manage separate trades on the same symbol on the same account. The FIFO rule prevents a trade from being closed if there is an earlier trade (ticket) still open. Please bear this in mind if your broker requires you to follow the FIFO rule and you wish to use multi-trade mode.

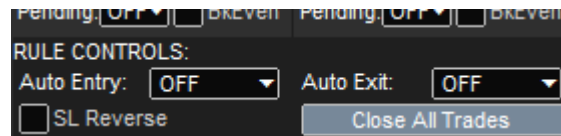
7 BUILT-IN INDICATORS

The EA is supplied with several professional grade indicators that are built into the EA. The first is shown within the control panel that gives the direction the market is moving in, on multiple timeframes. A solid arrow is where there has been a reversal and a hollow arrow is where it's just currently a retracement. The number next to the arrow is the pips moved in that direction and can be used to know how much of the move has been missed. Note, the timeframes shown can be configured via the input property **Main_indiDirPeriods**.

The average daily range is shown in the top left of the chart, together the percentage of that range that the symbol has already done. If that percentage is approaching 100% or exceed 100% that it can be an indication that the symbol may not move much more in the current trading day.

Finally, the current spread is shown top right, color coded if spread is high. The current ask/bid prices are show bottom left in large text. Again color coded if the price is going up, down or the same (yellow). Both of these indicators can be turned off.

8 SUPPLIED RULES



The EA is supplied with rules that permit trades to be opened or closed when the trend changes direction for the chart period the EA is running on (unless set differently by the Period selection list). The detection of the trend change is achieved using our built-in indicator, shown by the trend direction arrows on the control panel. Note, the period does need to be shown by the arrows, i.e. in **Main_indiDirPeriods**.

Use the Auto Entry selection list to set the EA to signal on the next trend change. Two options are available that relate to trend strength, i.e. retracement and reversal. Retracement will signal on retracement strength and selecting Reversal will only alert/trade when it appears the market has actually changed direction. Note, for the alert/trade to actually happen the Mode selection box also needs to be set to something above EVL (evaluate), e.g. ALT for alerting, or (say) TC to trade on every trend change.

The Auto Exit can be used to perform an exit based on the same criteria, just in the opposite direction. The rule uses a command called **FORCE_CLOSE** which means the close will have even if just EVL (evaluate) mode, or above.

The SL Reverse tick box

The Close All Trades button will signal to this instance and other instances of the EA on other symbols to close all trades that the EAs are managing, i.e. trades with the magic number that is set for the EA. The **FORCE_CLOSE** command is again used, so will work if the EA is above manual mode.

9 IMPORTANT CONSIDERATIONS



The EA must remain on the chart of the symbol for which a trade has been opened. Otherwise, the hidden items, including breakeven and auto exit will fail to work.



Your internet connection and login status with your broker must remain in place for the hidden items, including breakeven and auto exit to work. The broker stop loss and take profit will be the fallback if this fails.



A smiley face ☺ is shown in the top right of the EA's control panel that indicates that the EA is allowed and is able to trade (including being able to a close trade (say) when a hidden stop loss is hit).

If you see a sad face ☹ then check trading allowed/login and internet status, as the EA believes it is unable to trade and the hidden items including auto exit and breakeven will not work.

10 STRATEGY AUTOMATION

A big part of the EA is that it can be configured with your trading rules that can alert, open/close trades, setup pending lines, adjust stop loss and more, based on indicator/chart object values, candle values and other information from MetaTrader. The rules can also be interactive with extra control panel items, such as tick boxes, input boxes, buttons, etc. that the rules can act upon.



Remember we are here to help! This part of the system can seem a bit daunting and there is a learning curve. However, feel free to contact us if you are suck / don't understand: support@runwisefx.com

If you are interested in amending/writing your own rules the please see our document: http://www.runwisefx.com/runwiseFX_CSA_Rule_Writing_Guide.pdf

11 USING WITH STRATEGY TESTER

The EA can be run in the strategy tester. However, the strategy tester can't access any EA configuration you may have when the EA is running on a normal chart. This is because the files folder the tester has access to is in a different place to the files folder used on a normal chart. However, if you click **CONFIG** button on the panel on a normal chart and click **Copy Config to Strategy Tester** button. This will copy the EA configuration from files folder of normal charts to the files folder used by the Strategy Tester.

For the EA panel buttons to work in the Strategy Tester then a test needs to be running at least at market speed.

Don't forget to use the Expert Properties button in the Strategy Tester frame to set any EA inputs you require.

11.1 Using Optimizer with String Inputs

String EA inputs, such as `Important_defaultStopLossMode`, can't be effectively used with the optimizer, as it requires numeric type inputs for Start/Step/Stop. However, this can be solved by using our `{}` expressions to replace with `User_configNum*` inputs that are numeric and can be optimized.

Examples:

To optimize stop loss pips set:

`Important_defaultStopLossMode={c.User_configNum1}`

You can then optimize stop loss by optimizing `User_configNum1` as that will be fed into `Important_defaultStopLossMode`.

To optimize (say) three take profit targets set:

`Important_tpRiskRewardRatios={c.User_configNum1},{c.User_configNum2},{c.User_configNum3}`

You can then optimize take profits targets with `User_configNum1` to 3, respectively.

12 MULTI-ACCOUNTS

Multiple instances of the EA on different accounts, i.e. on different instances of MetaTrader, can talk to each other provided they are on the same computer. This can enable actions on one account to be automatically replicated on the other accounts, using a master/slave principle. This approach works better than a trade copier, as trades can be opened/closed at the same time, where a trade copier needs to see the trade opened on one account before it can be opened on the other and similar for close. This creates an inherent delay and the potential for slippage between accounts.

To activate multi account support set the **Main_multiAccountMode** input property of the EA to Master on the account you want to be master (a M should appear above the CONFIG button) and set **Main_multiAccountMode** to slave on the other accounts (a S should appear). Actions performed on the master account should then be replicated on the slave accounts.

★★★★★

**top
tip**

You can test the link via the CONFIG button and then click Test Alert to Slaves button on the Configuration & Tools popup.



It is possible to share the same configuration file across multiple instances of MetaTrader on the same computer. To do this set **Main_configFileName** EA input property to the configuration filename and set **Main_configInCommonFolder** input property to true. The configuration file should be placed in the common data folder. The common data folder can be found by going to the **Tools | MetaQuotes Language Editor** and then in that tool clicking on to **File | Open Common Data Folder** menu.

13 STRATEGY BUILDER



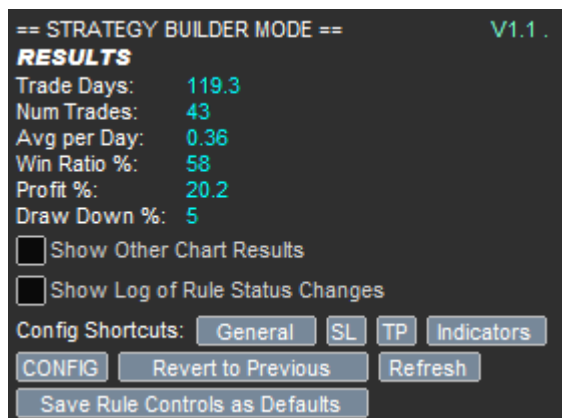
This section covers the Strategy Builder version of EA. This allows you see Win Ratio/Profit/Draw Down stats for the configuration currently loaded. This is achieved much more conveniently and faster than using MetaTrader's Strategy Tester.

13.1 Activating Strategy Builder Mode

Click CONFIG button and Click 'Activate Strategy Builder Mode' button shown at the top of the pop-up. This will switch to Strategy Builder mode that will calculate and display statistics for currently configured strategy/settings.

You can de-activate Strategy Builder mode by press CONFIG button and press button again.

13.2 Understanding Statistics Shown



Trade Days is number of days tested. You can increase this by adjusting EA StratBuild_statsBarsToCalcBack or StratBuild_statsDaysToCalcBack. See later.

- Num Trades is number of trades that occurred of trades days.
- Avg per Day is the number of trade per day that occurred as an average
- Win Ratio % is the percentage of trades that did not result in loss
- Profit % is the profit made on the account start balance
- Draw Down % is the maximum draw down that occurred during the test period

13.3 Changing Configuration to View Stats for Changes

You can use CONFIG button to make changes, e.g. stop loss regime, to see affect of those changes to the stats. You can also make changes to Rule Controls, e.g. to turn

on/off checks/filters and use 'Save Rule Controls as Defaults', which run stats with the change to rule controls, by making current settings as default for each trade.

For your convenience, you can use configuration shortcut buttons General, SL, TP, Indicators to access those configuration pop-ups more quickly than having to go via CONFIG button.

If the configuration changes were not profitable then simply press Revert to Previous to return to previous configuration.

13.4 Show Other Chart Results

Use this tick box to see results from other EAs. This allows you to test multiple symbols / timeframes at the same time. The pop-up also 'Change on Last' which is the improvement (or not) of each of the stats.

13.5 Show Log of Rule Changes

Displays log of expert events, e.g. changes to status text, during test period. Use button on log panel to navigate through entries. You can use Chart button to put log to time of middle of chart.

13.6 EA Inputs for Strategy Build Mode

| Variable | Description |
|------------------------------------|---|
| StratBuild_openArrowFontExtra | Increase value to make arrows bigger showing where simulated trades were opened |
| StratBuild_logDisplayLines | How many lines to show when 'show log' is ticked |
| StratBuild_logDisplayWidth | How wide log should be in pixels |
| StratBuild_otherChartsResultsOrder | Controls how 'other chart results' table is ordered. This can be used to show best performing symbols/periods at the top. |
| StratBuild_spread | The spread to use when simulating trades, in pips. |
| StratBuild_startBalance | Start balance to be used when calculating statistics. Shouldn't need to change. |

| Variable | Description |
|----------------------------------|--|
| StratBuild_statsBarsToCalcBack | How far back in bars/candles to run stats over |
| StratBuild_statsDaysToCalcBack | If not -1 then will use the as number of days to test for |
| StratBuild_statsDrawDownRelative | If <i>true</i> , then will show draw dawn relative to current balance, instead of absolute which is start balance. |

14 EA INPUT PROPERTIES



Any changes to the EA input properties can be applied to other charts by saving a template within MetaTrader and they applying that template to other charts. Please consult the MetaTrader help file on this.

| Variable | Description |
|------------------------------------|--|
| Important_brokerSLTPSetOnOrderSend | Set to <i>true</i> if your broker requires stop loss/take profit to be set in order send command. |
| Important_brokerSupportsHedging | Set to <i>false</i> if your broker does not support hedging. This will prevent the EA from trying to automatically open trades in the opposite direction to any trade already open. |
| Important_defaultStopLossMode | Default stop loss mode |
| Important_defaultStopLossTrail | Default setting for the stop loss trail tick box |
| Important_magicNumberToUse | Magic number for trades that the EA opens. The EA will ignore trades with a different magic number (now often called Expert ID). |
| Important_magicNumberToUseMax | If not set to -1 then activates multi trade support with each trade having a different magic number (now often called Expert ID). This input gives the maximum that will allocated and represent the maximum number of trades the EA can handle. Note, a different trade is required if want two or more trades in same direction (e.g.. buy) with different stop loss / take profit / pending orders. |
| Important_lots | Lot size to be used if risAmount is not set (blank). If this input is set the Important_riskAmount should not be, i.e. be blank. The value can still be changed on the control panel. |

| Variable | Description |
|---------------------------------------|--|
| Important_brokerSLTPSetOnOrderSend | Set to <i>true</i> if your broker requires stop loss/take profit to be set in order send command. |
| Important_riskAmount | Risk amount to be used. Can be % of account/equity (whichever is smaller) or fixed amount (omit percentage). The value can still be changed on the control panel. |
| Important_strategyTestTradeContinuous | If set then when strategy testing the auto mode will be set to 'trade continuous', regardless of the setting of Main_defaultMode |
| Important_tpRiskRewardAsPips | If set then any supplied values in EA input Important_tpRiskRewardRatios will be regarded as pips rather than as risk reward ratios. |
| Important_tpRiskRewardRatios | Take profit risk reward ratios (comma separated) for each level. If value followed by 'p' then will be regarded as pips (this happen without the 'p' if Important_tpRiskRewardAsPips is set). |
| Important_tpExitPrcts | Take profit exit percentages (comma separated) for each level |
| Important_tpAdjustSLasTargetsReached | <p>Stop loss adjustment to be made when take profit target price is reached. Values are comma separated for each level. Can be number of pips to set SL to, or can be set to RAISE to raise SL to previous target, or open price if first target. Can be set to STEP to trail stop loss just when profit target is first reached.</p> <p>Can also contain followed by BE or TRAIL or BETRAIL. This will set break even tick box or/and trail tick box when take profit line is reached.</p> <p>(see Appendix A for examples)</p> |

| Variable | Description |
|---------------------------------------|---|
| Important_brokerSLTPSetOnOrderSend | Set to <i>true</i> if your broker requires stop loss/take profit to be set in order send command. |
| Main_additionalGUISizing | Additional pixels to add between control panel GUI items. Useful if system font sizing above normal is being used. |
| Main_alert* | Allows various alerts to be turned on and off |
| Main_autoClearAlertOnOppositeSignal | Will permit another alert/trade when rules signal in the opposite direction. If this is set to false then rules will need to issue RESET_ALERT command in order to permit a trade on a fresh move. |
| Main_autoClearOnlyOnNewCandleOrConfig | If set then auto clear will only happen on new candle or configuration change. This will prevent repeated alerts when rules are straggling the buy/sell situation on a per tick basis, as the reset will only happen on a new candle. |
| Main_averageDailyRangeDays | Days used for ADR calculation. Recommend leaving as is. |
| Main_averageRangeCorner | Chart corner where ADR is displayed |
| Main_averageRangeMode | Switch from ADR to ATR (Average True Range) |
| Main_averageRangeX | X location of ADR |
| Main_averageRangeY | Y location of ADR |
| Main_averageTrueRangeDays | Days used for ATR calculation. Recommend leaving as is. |
| Main_breakevenThresholdPips | Pip profit below which breakeven close will occur (if set) |

| Variable | Description |
|--|---|
| Important_brokerSLTPSetOnOrderSend | Set to <i>true</i> if your broker requires stop loss/take profit to be set in order send command. |
| Main_brokerModifyMinFreqSecs | Minimum number of seconds between requests to broker to modify trade, i.e. set stop loss / take profit. Acts as safety net to prevents broker from being bombarded with modify requests. |
| Main_brokerSLTPAdjustmentThresholdPips | Pips difference between calculated broker SL/TP and actual for modification to happen |
| Main_brokerStopLossExtraPips | Extra pips to add to hidden SL for broker SL (or % of Daily Range) |
| Main_brokerStopLossMoveWithHidden | If <i>true</i> will modify broker SL if hidden SL is moved |
| Main_brokerTakeProfitExtraPips | Extra pips to add to hidden TP for broker TP (or % of Daily Range) |
| Main_brokerTakeProfitMoveWithHidden | If <i>true</i> will modify broker TP if hidden TP is moved |
| Main_confirm* | Allows various confirmation message boxes to be turned on and off |
| Main_configFileName | If set then this file will be used as the configuration file for the EA. |
| Main_configInCommonFolder | If set the common data folder will be used when reading/writing the configuration file of the EA. This can be used to share the same configuration file for multiple instances of the EA on different accounts. |
| Main_configInUnicode | Should be set if configuration file has been save in Unicode (international) format |

| Variable | Description |
|------------------------------------|--|
| Important_brokerSLTPSetOnOrderSend | Set to <i>true</i> if your broker requires stop loss/take profit to be set in order send command. |
| Main_defaultMode | Default rule mode to be used when EA loaded onto chart |
| Main_defaultPeriod | Default period to be used when EA loaded onto chart |
| Main_diagnosticMode | This is for use by RunwiseFX. We may ask you put in diagnostic mode but the file generated is only suitable for us to read. |
| Main_fifoMode | Control how trades are closed. 'When Possible' will follow FIFO rule, where possible, i.e. won't go as far as closing trades not managed by EA, where 'strict' will. The 'first in last out if scaled' will close last opened ticket on a scaled-in trade first. |
| Main_GUIautoConnect | If set then will automatically connect with Windows GUI if present |
| Main_GUIsendExtraDataForSymbolTab | If set then will send additional data to the Windows GUI, if present, that allows the symbol tab to work. Can turn off if not interested in symbol tab in order to reduce processor load. |
| Main_magicNumbersForSignalService | Comma separated list of magic numbers that will be used for signal service. Used if corresponding value on GUI is blank. Note, must have allocated magic numbers using Important_magicNumber* |
| Main_manualStopLossAfterOpen | If set then will put stop loss to manual mode when a trade is opened. This allows it to be adjusted by moving the line on the chart. |

| Variable | Description |
|------------------------------------|--|
| Important_brokerSLTPSetOnOrderSend | Set to <i>true</i> if your broker requires stop loss/take profit to be set in order send command. |
| Main_manualTakeProfitAfterOpen | If set then will put take profit to manual mode when a trade is opened. This allows the take profit lines to be adjusted by moving the lines on the chart. |
| Main_minMarginToKeepFreePrct | If ≥ 0 then will keep free margin of specified percentage. The lot size will be reduced accordingly on newly opened trades. If lot size is being limited in this way then will show in orange color on the panel. |
| Main_maxSlippagePips | Maximum slippage when opening tickets, if -1 then uses spread |
| Main_martingaleBreakevenMaxPips | If ≥ 0 then will give the maximum number of pips that a trade will be regarded as breakeven for the purposes of the Martingale calculation. If breakeven then will not reset Martingale but won't count it as losing trade either, i.e. won't increase martingale level. |
| Main_martingaleLotsAdjust | Used to control how lots are adjusted for Martingale. If left blank then turns Martingale off. Can either be value which is multiplied by consecutive losing lots for symbol, e.g. if set to 1 then will open trade that will be configured lots + (consecutive losing lots * 1). Or, it can be a comma separated list of lots, which are indexed by number of consecutive losing trades. If reaches end of list then no Martingale will be performed. |
| Main_martingaleMax | If ≥ 0 then gives maximum number of Martingale levels that are allowed. |
| Main_martingaleMaxAction | Says what to do after Martingale maximum number of levels has been reached. Can either reset to first level or stop Martingale, where lots will stay as configured on panel. |

| Variable | Description |
|---|---|
| Important_brokerSLTPSetOnOrderSend | Set to <i>true</i> if your broker requires stop loss/take profit to be set in order send command. |
| Main_maxSpreadForAutoTradeOpen | Maximum spread for which a trade open will be allowed to go ahead, in pips. Useful to prevent the EA from automatically opening a trade when the spread is especially bad. |
| Main_maxSpreadForManualTradeOpen | As Main_maxSpreadForAutoTradeOpen but for when a trade is manually being opened |
| Main_pendingBuyOnBid | If <i>true</i> will alert/trade pending when bid price reaches target price |
| Main_pendingCancelOther | If <i>true</i> will cancel pending order in opposite direction when pending price is hit. |
| Main_pendingCancelIfHitButDisabled | If <i>true</i> then when trading rules have temporarily disabled pending orders, e.g. due to indicator value, then if pending order target price is hit then the pending order will be cancelled. |
| Main_pendingExpirySecs | If > 0 then will automatically expire pending orders after this amount of time. Note, this is for both pending orders set manually and via rules. |
| Main_pendingOnCloseActOnPrice-AtOrBeyondClose | If <i>true</i> and pending order set to operate when closed price is beyond target price then it will ensure that price hasn't gone back after close. This is achieved by changing pending mode to TT (trade on touch) when close price has reached target pending price. |
| Main_pendingOnCloseUseHeikenAshi | If <i>true</i> then if pending set to TC (trade on close), or AC, then will use Heiken Ashi close price (as configured by input <code>Obscure_indicatorHeikenAshiClose</code>) rather than close price of ordinary candle. |

| Variable | Description |
|--|--|
| Important_brokerSLTPSetOnOrderSend | Set to <i>true</i> if your broker requires stop loss/take profit to be set in order send command. |
| Main_indiDirPeriods | Comma separated list of periods for which the built-in direction arrows should be calculated and shown for |
| Main_indiDirShow | If set the will shown the built-in direction arrows on the control panel of the EA |
| Main_hideTPLinesIfTradeNot OpenUnlessSetManual | If set then the hidden take profit lines will not be shown until a trade is open. This can be useful to de-clutter the chart prior to trade open. |
| Main_hideTPLinesWhenTaken | If take profit line has been reached/taken and trade still open then the take profit line will no longer be displayed. |
| Main_maxSlippagePips | Maximum slippage allowed when opening/closing trades, in pips |
| Main_lineTextStopLoss | If not empty will allow format the stop loss line to this text. Can include curly bracketed expressions, e.g. to show current profit. See Appendix D for examples. |
| Main_lineTextTakeProfit | If not empty will allow format the take profit line(s) to this text. Can include curly bracketed expressions, e.g. to show current profit. See Appendix D for examples |
| Main_lots[Min Max] | If not -1 then can be used to limit the calculated lots between a supplied min and max value. Note, if Main_riskAmntAsAmntPerPip is set then gives min/max amount per pip. |
| Main_panelShowDualRiskSettings | If <i>true</i> then will allow risk setting to be changed on the panel on per direction basis |

| Variable | Description |
|------------------------------------|--|
| Important_brokerSLTPSetOnOrderSend | Set to <i>true</i> if your broker requires stop loss/take profit to be set in order send command. |
| Main_panelShowPeriodSettings | If <i>true</i> then will allow period setting to be change on the control panel. The period setting is used for such things as the automatic stop loss calculation and the pending order on candle close |
| Main_pendingCancelOther | If <i>true</i> then opening of pending will cancel any in other direction |
| Main_pendingExpirySecs | If > 0 then will give an expiry for pending orders, where they will be automatically deleted after the specified duration of time (in seconds). The timer starts when the pending line is placed on the chart either manually via the panel or via a configured rule. |
| Main_pendingOffsetOnSignalPips | If the EA is in auto mode 'PND' then this gives the number of pips to offset the pending order from the market price, which is placed when there is trade open signal. The value can be expressed as pips or as a percentage of the Average Daily Range of the symbol. |
| Main_resetAfterTradeClosed | If <i>true</i> will reset setting to default after trade closed |
| Main_riskAmntAsAmntPerPip | If <i>true</i> will interpret any supplied risk setting that is not a percentage, i.e. is an amount, as the amount per pip that the lots should be calculated for. |
| Main_riskMinPips | If not blank then will be used for the minimum risk pips used in the lot size calculation. Can be used to limit lot size if the stop loss is very shallow. |
| Main_scaleInPrctDefault | Default percentage to scale-in by |

| Variable | Description |
|------------------------------------|---|
| Important_brokerSLTPSetOnOrderSend | Set to <i>true</i> if your broker requires stop loss/take profit to be set in order send command. |
| Main_scaleInLotsInsteadOfPrct | If <i>true</i> will interpret scale-in percentage value directly as lots |
| Main_screenShotOnAutoOpen | Take screenshot when trade is opened automatically. Screenshots appear in the MQL\files directory of the Data Folder and start with 'rwx_ss_'. Further control of screenshots can be made via inputs Gen_screenShot*. |
| Main_screenShotOnManualOpen | Take screenshot when trade is opened manually. |
| Main_selection* | Allows various selection lists to be altered |
| Main_show* | Allows various items to be shown or not |
| Main_stopLossMinManualPips | Used when stop loss is set manually (moving line on chart) and trade is not open yet. Won't open trade if stop loss is less than this, e.g. market price come very close to the set stop loss. Can be used to avoid a very shallow stop loss with potentially high lot size calculation and a quick close due to stop loss. |
| Main_stopLoss[Min Max]Pips | Min/max of calculated stop loss (can be % of Daily Range). This is applied in both AUTO and RULE stop loss modes. |
| Main_stopLossCalcOnClosePrice | Controls whether the close price or market price is used when setting stop loss. Can be No, i.e. use market price, Yes or TrailOnly, where the close price will be used but only when trailing, else market. |

| Variable | Description |
|---|---|
| Important_brokerSLTPSetOnOrderSend | Set to <i>true</i> if your broker requires stop loss/take profit to be set in order send command. |
| Main_stopLossOffsetPips | Will offset the AUTO stop loss by the supplied number of pips. If positive value then will increase stop loss and a negative value will reduce. Note, the new value will then be subject to the configured min/max. |
| Main_stopLossTrailStep | If set then will trail stop loss at discrete steps of size supplied by this input. Can be expressed as pips or percentage of daily range if % sign added. |
| Main_stopLossTrailStepMode | If not blank and Main_stopLossTrailStep not blank then will change stop loss mode to this when trail step occurs. Can be used to (say) tighten stop loss when step level first reached. |
| Main_stopLossUseCalcValueAtOpenForTrail | If set then when trailing SL in mode of AUTO or RULE it will use the stop loss pips at the time the trade was opened as the trail distance. If false then the any trailing SL will move based on the latest indicator value being used for the stop loss. |
| Main_strategyTestOutputResults | Will write results of strategy test to runwiseFX folder in the Common Data Folder |
| Main_strategyTestOutputAltName | If set then will be used in filename of strategy test results file, instead of symbol. |
| Main_strategyTestHighSpeed | If set then will speed up strategy test but without reducing accuracy of testing. |
| Main_strategyTestHighSpeedExtraLowHr | If set to other than -1 then will only evaluate rules on bar open when strategy testing if hour of server time is less than this hour. |

| Variable | Description |
|---------------------------------------|--|
| Important_brokerSLTPSetOnOrderSend | Set to <i>true</i> if your broker requires stop loss/take profit to be set in order send command. |
| Main_strategyTestHighSpeedExtraHighHr | If set to other than -1 then will only evaluate rules on bar open when strategy testing if hour of server time is greater than this hour. |
| Main_tradeOpenRetryMaxMovePips | If trade open fails with error or spread too high (see Main_maxSpreadFor*) then gives the maximum number of pips that price can move from original attempt for a retry to happen (can be specified as pips, e.g. 6 or % of Daily Range, e.g. 5%). |
| Main_tradeDays | Allows you to specify the trading days, i.e. days of the week, that the EA is allowed to auto trade. The values are comma separated, which gives day of week where Sunday=0,Monday=1 etc. For example, to only trade Tue-Thu, set Main_tradeDays=2,3,4 If left blank then will trade any day. |
| Main_tradeTime* | Allows trading time to specified. Up to two start and ends per day are supported. All times are in server/broker time. For example to only trade between 10:00-19:00 server time, set: Main_tradeTimeStartHours=10 Main_tradeTimeEndHours=17 Another example, to only trade 10:30-12:30 and 14:30-16:30, set: Main_tradeTimeStartHours=10 Main_tradeTimeStartMins=30 Main_tradeTimeEndHours=12 Main_tradeTimeEndMins=30 Main_tradeTimeStart2Hours=14 Main_tradeTimeStart2Mins=30 Main_tradeTimeEnd2Hours=16 Main_tradeTimeEnd2Mins=30 |

| Variable | Description |
|------------------------------------|---|
| Important_brokerSLTPSetOnOrderSend | Set to <i>true</i> if your broker requires stop loss/take profit to be set in order send command. |
| Main_tradeTimeFridayReduceMins | Can be used to reduce end time of when EA is allowed to auto trade on a Friday. This is useful to finish trading earlier on Friday before markets close for the weekend. The value is in minutes, so to stop trading an hour early than specified in Main_tradeTime*, set Main_tradeTimeFridayReduceMins=60 |
| Main_tradeWithoutStopLossAllowed | If <i>true</i> will allow a trade to be opened where a stop loss has not been set. |
| Main_timer* | Allows processing performed periodically to be adjusted in terms of frequency performed. Shouldn't need to change theses. |
| Main_tpAddSpread | If <i>true</i> will add spread to calculated take profit risk reward ratio prices |
| Main_tpExtraPipsToAdd | Extra pips to add to the calculated take profit price, when calculated using a risk reward ratio. Can be used to add extra pips to cover commission, for example. |
| Main_useAskForSLTP | Use Ask price for hidden stop loss and take profit where it would be used if broker |
| Main_variableIdxPerDirection | If set the variables will be stored on a per direction basis. Saves having to create separate variables for sell and buy. |
| Box_* | Use to position GUI control panel where you would like |
| Style_* | Use to control the style of the various lines |
| Color_* | Use to control the color of various items |

| Variable | Description |
|---------------------------------------|---|
| Important_brokerSLTPSetOnOrderSend | Set to <i>true</i> if your broker requires stop loss/take profit to be set in order send command. |
| Obscure_allowNonVisualTesting | If <i>true</i> will allow the EA to be used in the strategy tester in non-visual mode. Note, this is set to <i>false</i> by default so the EA doesn't fail submission test to Market. |
| Obscure_indicatorHeikenAshiClose | Custom indicator to use in order to Heiken Ashi Close price, when configured to do so. Format is comma separated with indicator name for MT4,color index for MT4, indicator name for MT5, color index for MT5 |
| Obscure_simulateRealTicksInTimer | Can be used for offline charts, e.g. Renko charts, where the chart may not be receive market ticks. If <i>true</i> then will simulate these ticks using the EA's timer processing. |
| Obscure_updateAsMoveSLTPlines | If <i>true</i> then will recalculate stop loss/take profit as line is moved on the chart, i.e. as mouse is moved with line clicked. This includes updating the text shown above those lines. |
| Rules_maxLoopIterations | Maximum iterations when rule is marked for loop but LOOP_END command hasn't yet been encountered in the rule. |
| Rules_logRuleOutcomeChanges | Logs changes in the rule status comment. Note, changed in values that are in brackets will not be regarded as a change so the status comment text. |
| Rules_testingServerToLondonHourOffset | Offset to be applied to server hour in order to get London hour when using the strategy tester. |

| Variable | Description |
|--|---|
| Important_brokerSLTPSetOnOrderSend | Set to <i>true</i> if your broker requires stop loss/take profit to be set in order send command. |
| Rules_testingServerAutoAmericanDSThandling | If set then will adjust testingServerToLondonHourOffset (say) further if Europe DST (daylight saving time) is on but American DST isn't, or visa versa. Recommend setting to true if server time changes with American DST. |
| User_* | Various configuration items that can be referenced in the rules. Designed for user to use and is great if using the Optimizer of the Strategy Tester, as the rules can be automatically tested with a variety of possible values. |
| Block_* | Used to control block A and B which are spaces above/below (A) and to the left/right (B) of the EA chart control panel that can be used to output additional information. The blocks auto move if the corner that the EA control panel is positioned to is changed. |
| Property_SL* | Used to set the properties of the indicators used for setting the stop loss automatically (dependant on calc method) |
| RWFX_* | Special configuration items that are used in the built-in rules supplied with the EA or in rules in our ready-made rules library. |
| Gen_accountCurrencyDigits | Number of digits to show after decimal point when displaying account balance, etc. |
| Gen_fallbackPointToPipDivider | If the EA can't work out automatically how to convert points to pips then this value will be used. The default is 10, which is correct for '5 digit brokers', i.e. that quote 10 th of a pip. For '4 digit brokers', i.e. who don't quote fractional pips, then this value would need to be 1. |

| Variable | Description |
|-------------------------------------|--|
| Important_brokerSLTPSetOnOrderSend | Set to <i>true</i> if your broker requires stop loss/take profit to be set in order send command. |
| Gen_selListMaxItemsPerColumn | Sets the maximum number of items that can appear per column when a pop-up selection list is shown |
| News_impactMaxForAllCountriesEvents | Gives the impact that should be used for news events that affect multiple countries (currencies), e.g. G7 conference. |
| News_strategyTesterAllow | If <i>true</i> will the will read news when strategy testing, which will be read from runwiseFX_news.xml in tester\files folder of MT Data Folder. The file will need to be already populated with data for the test period. |
| News_strategyTesterGMTOffsetHrs | Offset to apply to convert server time, i.e. tester time, to GMT that news events are stored in. |
| News_strategyTesterGMTNewYorkSummer | If <i>true</i> will apply an additional -1 offset from server time if New York summer time is in effect for tester time. |
| Indi_* | Controls the display and calculation of built-in indicators, e.g support/resistance/pivot lines. |
| Signal_lotsToUse | Lots to be used when opening signalled trade. If left blank then will be proportional to source account balance/leverage compared to your own |
| Signal_maxSlippageFromSourcePips | Maximum slippage allowed from the original source signal open price. |

15 USING OUR EA TO CONTROL ANOTHER EA's TRADES

It is possible for our EA to control trades opened by another EA. This allows the hidden SL / TP of our EA to be used and configurable exit criteria. You'll also need to have multiple charts open: One for our EA (per symbol wish to trade) and another chart of the third party EA.

The magic numbers (Expert ID) of our EA and third party EA need to match, i.e. the magic number our EA is configured with via EA input Important_magicNumberToUse or via CONFIG | General Settings buttons must match trades open by third party.



You can tell what the magic number (also known as Expert ID) is by hovering the mouse pointer over the trade and it will pop-up has a hint.



Some care is needed when controlling trades from another EA, as both could be trying to update stop loss (say) e.g. if third party EA trails the stop loss. Also, if the other EA is poorly coded then the other EA could try to re-open a trade if our EA closes it. This could result in repeated opening and closing.

Recommend testing thoroughly on a demo account.

When a trade is open you will get 'orphan trade detected' alert for our EA and it will set the hidden stop loss and take profit based on the broker stop loss and take profit of the trade detected. The close and scale-in button should appear on our EAs panel. If this doesn't happen then highly likely the magic number our EA is configured with EA does not match that of the trade that has been opened by the third party EA.

Note, you can turn off the orphan detected alert by setting EA input Main_alertOrphanTradeDetected to false.

16 CONFIGURING FOR BINARY OPTIONS BROKER



runwiseFX does not recommend Binary Options (BO) trading/brokers. The risk reward ratio is always less than 1 which breaks a golden rule of trading, i.e. you have to be right more times than you are wrong just to break even. Secondly, BO brokers do not put any trades to the market so if you win they lose. This creates a conflict of interest and we've had lots of reports of brokers doing anything they can to get rid of you if you start consistently withdrawing profits, e.g. making it difficult to withdraw, platform disconnects/freezes, etc.

That being said it is possible to configure our EA for Binary Options:

The lots is used to notify the Binary Options broker of the amount you wish to risk.

The expiry can be set by Trade Order Comment, which is used to set the comment on the ticket/trade. The format most Binary Options brokers use is:

BO exp:Expiry

Where Expiry is in seconds. Therefore, to configure the EA to place a Binary Options that will expire in 5 minutes, set BO exp:300

To set the Trade Comment click CONFIG button | General Settings button and there is a box for the Trade Comment.

17 WINDOWS GUI APPLICATION

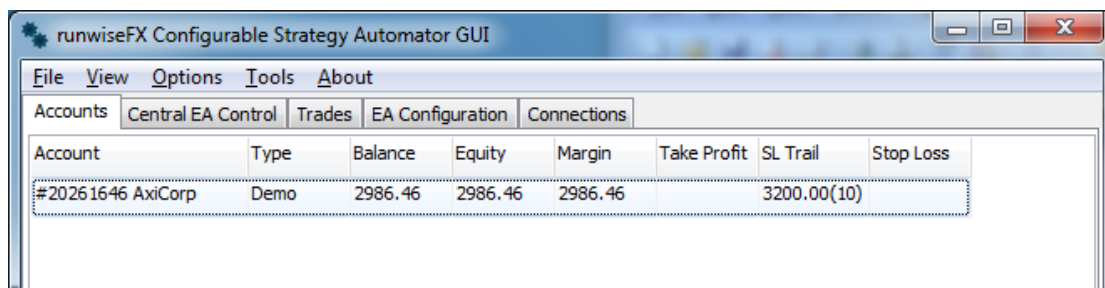
Our new Windows GUI application allows the EA to be more easily configured and also provides real-time central control of multiple EAs running on different charts, including different accounts. The GUI can also monitor your account equity and can be set to take action when equity targets are reached, e.g. close all trades.

The GUI can be downloaded from <http://runwisefx.com/csa/setup.exe>

Note, all our executables are digitally signed by us – vendor: Runwise Ltd.

17.1 Account Tab

List connected accounts. The Take Profit cell can be used to set an equity target which will cause all open trades that the EAs are managing to be closed when reached. The SL Trail cell offers similar, but instead of closing trades it will set the stop loss to trail mode. You can optionally enter in brackets how many pips to trail by, for example:



In the screen shot the stop loss on any open trades will set to trail by 10 pips when the equity of the account reaches 3200.

A stop loss column allows you to set the equity below which all open trades will be closed.

17.2 Central EA Control Tab

Lists each EA connected and shows you the status lines of the EA. You can also set the mode and period of the EA by clicking the value in the cell.

17.3 Trades Tab

Lists open and recently closed trades

17.4 EA Configuration Tab

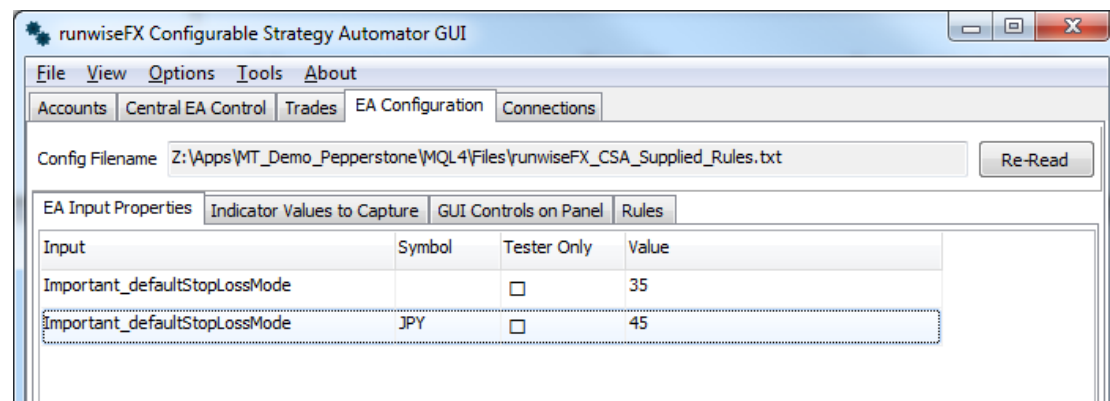
This allows you to configure the EA. By default the currently connected EA config will be editable.

The configuration is achieved by the following four sub-tabs.

17.4.1 EA inputs Sub Tab

Allows you configure EA inputs. The symbol column can be used to set values that only get used when the EA is run on chart containing that symbol. The tester tick box will only use the value if in Strategy Tester mode.

For example, the following will set the default stop loss to 35 pips, but for Japanese currency pairs it will be set to 45 pips.



17.4.2 Indicators to Capture Sub Tab

Allows you to specify the indicator to capture. Once an indicator is being captured in that can be used in the trading rules to take action.

17.4.3 GUI Controls Sub Tab

Allows you configure the GUI controls, e.g. tick boxes, text boxes, etc., that you would like placed at the bottom the EA control panel on the chart. The rules can then reference those controls and behave differently depending on what the control are set to. For example, a tick box can be place on the control panel that will turn on/off an automated exit.

17.4.4 Rules Sub Tab

Allows the rules to be specified that contain what you would the EA to do automatically or on (say) a button press. Click the [EDIT] cell to edit the logic lines of the rule.

17.5 Signal Service

The screenshot shows the 'runwiseFX Configurable Strategy Automator GUI' with the 'Signal Service' tab selected. The interface includes a menu bar (File, View, Options, Tools, About) and a tabbed navigation system (Accounts, Central EA Control, Symbol, Trades, EA Configuration, Signal Service, Connections, Errors, Diagnostics). The 'Signal Service' section is divided into three main areas: 'Subscription Login', 'Destination Account / Magic Numbers', and 'Permissions'. The 'Subscription Login' area has fields for 'Account ID' (1234), 'Password', and 'Last Communication with Signal Server' (Disconnected), with an 'Update Login Details' button. The 'Destination Account / Magic Numbers' area has fields for 'Broker Account Number' and 'Magic Number(s)' (2), with an 'Update Destination' button and a note: 'Leave blank to use connected account / default magic number'. The 'Permissions' area contains six checkboxes, all of which are checked: 'Trade Open', 'Scale-In (Add to Position)', 'Stop Loss Adjustment', 'Take Profit Adjustment', 'Scale-Out (Partial Close)', and 'Trade Close'. Below these is a 'Signals Copy Log' area, which is currently empty. At the bottom of the window, a status bar reads: 'No EAs have connected to GUI | Not connected to signal subscription service'.

This allows you to subscribe to a signal service for high speed copying of signals from professional traders using runwiseFX. You can use instances of the runwiseFX EA to manage signalled trades, e.g. use hidden stop loss / take profit, raise to breakeven.

Subscription Login allows you to supply the account ID and password for your subscription and see connection status.

Destination Account / Magic Numbers allows you specify which of your account the signal trades should go to and which magic number should be used.#

Permissions allows you to control what the signal service can do on your account.

Signals copy log give details of signals received and the outcome on executing them on your account.



See EA inputs `Signal_lotsToUse` and `Signal_maxSlippageFromSourcePips`

17.6 File Menu

Allows you to open an EA configuration file from a different location

The 'Auto Save Config for Strategy Tester...' will, when you press the Save button, save the file in the MQL4\files folder of your Data Folder and also the tester\files folder at the same time.

The Save Desktop options will save the size and location of the open forms and restore them when the GUI is next run.

17.7 View Menu

Allows you to open the News Events and Alert Window. Note, the Alert Window is a replacement for the one in MetaTrader and allows you see the price the alert happened, how many pips the market has moved since the alert and you can double click the alert to bring the chart to the front. Note, you can also right click the alert to open a trade for the symbol and direction shown in the alert.

The View Menu also allows you to open additional pop-up forms for accounts, central control, trades and symbol.

The Logging Form provides diagnostic information.

17.8 Tools Menu

Allows you ask the connected EAs to re-read their configuration, so that they can pick-up and start using any config changes you have made.

18 CONTACTS

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Appendix A – Example Take Profit Settings

Normally take profit is expressed as a risk reward ratio. However, if EA input **Important_tpRiskRewardAsPips** is set to true the number of pips can be supplied via **Important_tpRiskRewardRatios**. The percentage of what a trade should be exited by is controlled by **Important_tpExitPrcts**. The stop loss, trailing and break even can be set as the profit targets are reached, this is configured by **Important_tpSLAdjustmentOnTargetsReached**.

Here are some common examples of settings:

Single Take Profit on Risk Reward Ratio of 1:1

Important_tpExitPrcts=100
Important_tpRiskRewardRatios=1

Single Take Profit on 30 Pips

Important_tpExitPrcts=100
Important_tpRiskRewardAsPips= true
Important_tpRiskRewardRatios=30

Set to Breakeven on 15 pips then Take Profit at 30 Pips

Important_tpExitPrcts=,100
Important_tpRiskRewardAsPips= true
Important_tpRiskRewardRatios=15,30
Important_tpSLAdjustmentOnTargetsReached=|BE

Set to Breakeven on 1:1 Risk Reward Ratio (but no Take Profit)

Important_tpExitPrcts=0
Important_tpRiskRewardRatios=1
Important_tpSLAdjustmentOnTargetsReached=|BE

Partial Take Profit (50%) and Breakeven on 1:1 Risk Reward and Full Take Profit on 1:2

Important_tpExitPrcts=50,100
Important_tpSLAdjustmentOnTargetsReached=|BE
Important_tpRiskRewardRatios=1,2

Partial Take Profit and Breakeven and Trailing SL on 1:1 Risk Reward and Full Take Profit on 1:2

Important_tpExitPrcts=50,100
Important_tpSLAdjustmentOnTargetsReached=|BETRAIL
Important_tpRiskRewardRatios=1,2

4 Take Profit Levels With Jumping Stop Loss as Targets Reached

Important_tpExitPrcts=25,50,75,100
Important_tpSLAdjustmentOnTargetsReached=RAISE,RAISE,RAISE,RAISE
Important_tpRiskRewardRatios=1,2,3,4

4 Take Profit Levels With Jumping Stop Loss as Targets Reached also Trail After 1:1 Reached

Important_tpExitPrcts=25,50,75,100
Important_tpSLAdjustmentOnTargetsReached=RAISE|TRAIL,RAISE,RAISE,RAISE
Important_tpRiskRewardRatios=1,2,3,4

Appendix B – Affect of Mode Setting vs Command

The 'Auto Mode:' setting allows you to tell the EA what to do when a rule executes a command, e.g. TRADE_OPEN, i.e. does it actually open a trade or just alert or just record that the trade open happened.

Here is a table of Mode vs Command to describe what the command will do for a particular mode setting.

| Mode/Command | TRADE_OPEN | SCALE_IN | TRADE_CLOSE | FORCE_CLOSE |
|--------------|-------------------|----------|-------------|-------------|
| MAN | None | None | None | None |
| ALT | Alert | Alert | Alert | Close Trade |
| PND | Set Pending Order | None | None | Close Trade |
| TOE | Open Trade | Scale In | Close Trade | Close Trade |
| TOA | Open Trade | Scale In | Close Trade | Close Trade |
| TC | Open Trade | Scale In | Close Trade | Close Trade |

Appendix C – Using Experts Log in MetaTrader

The Experts log is very useful for finding out why the EA didn't take a trade at particular time. This log contains a running commentary of the status of EA, over time, and will say why the EA didn't take a trade, e.g. an indicator hadn't lined up or spread too high and will also contain any errors, e.g. errors returned from the Broker when the EA tried to open the trade.

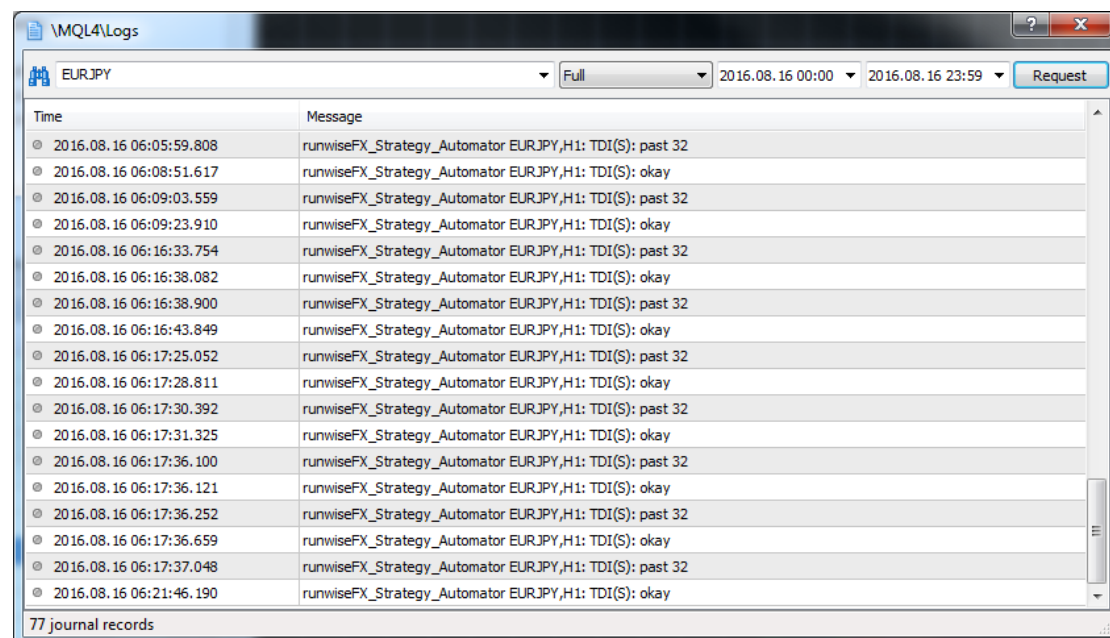
All log messages are in time in order and can be searched for a particular symbol. Remember the log is in local time which may need to be offset (say) by a couple of hours from server time, i.e. the time shown on the chart.

Log messages are in the format (example):

```
2016.08.15 14:44:54.949 runwiseFX_Strategy_Automator EURJPY,H1: TDI(B): red not
crossed yellow
2016.08.15 14:44:53.539 runwiseFX_Strategy_Automator EURJPY,H1: TDI(S): not crossed
50
```

Lines that contain (B) refer to buy situation and lines that contain (S) refer to the sell situation. Therefore, if looking why didn't take a buy at certain time then need to find last log message marked with (B) just before that time. Note, a log message gets added when the trade status (rule outcome) changes. All messages are designed to be human readable, e.g. 'ema not crossed', 'waiting for tdi' etc.

To access the Experts log go to the Expert tab on MetaTrader in the Terminal Panel. Right click and select View option. The following pop-up will be shown:



Enter the symbol in the box in the top left and enter the date range/time range of interest and click Request. This will then show you messages for that time range. Remember everything is local time so need to apply appropriate offset from server

time. Locate the last message just before where you think it should have traded (say) and that will be what the rule was waiting for.

Appendix D – Adjust Text on SL/TP Lines

Here are some examples settings for Main_lineTextStopLoss and Main_lineTextTakeProfit EA inputs that can be used to set the text shown on the SL and TP lines, respectively. Note, if either input is left blank then will show system default, i.e. pips from current / open price.

★★★★★ **top tip** If you set EA input Obscure_updateAsMoveSLTPlines to true then text on line will update as you move line (if moving manually) rather than waiting until you release the mouse button

Example 1) SL line risk amount, pips and lots:

```
Main_lineTextStopLoss=Rsk={f.formatFixed({f.mathMulti({f.pipDiffAuto({t.openOrCurrent};{t.slPrice}));{t.amntPerPip}});2)} Lt={t.lots}
{f.pipDiffAuto({t.openOrCurrent};{t.slPrice})}p
```

Example 2) SL/TP showing profit they represent, where SL will be positive if been trailed past the open price:

```
Main_lineTextStopLoss=Profit={f.formatFixed({f.mathMulti({f.pipDiffAuto({t.slPrice};{t.openOrCurrent}));{t.amntPerPip}});2)}
```

```
Main_lineTextTakeProfit={f.mathAddInt({t.tpLevel};1)}:
Profit={f.mathMulti(' {f.pipDiffAuto({t.tpPrice};{t.openOrCurrent2}) }';{t.amntPerPip};2
)}
```

Example 3) SL/TP showing profit and pips:

```
Main_lineTextStopLoss={f.pipDiffAuto({t.slPrice};{t.openOrCurrent})}p
({f.formatFixed({f.mathMulti({f.pipDiffAuto({t.slPrice};{t.openOrCurrent}));{t.amntPerPip}});2)}
```

```
Main_lineTextTakeProfit={f.mathAddInt({t.tpLevel};1)}:{f.pipDiffAuto({t.tpPrice};{t.openOrCurrent2})}p
{f.mathMulti(' {f.pipDiffAuto({t.tpPrice};{t.openOrCurrent2}) }';{t.amntPerPip};2)}
```

END OF DOCUMENT