

Shell User Guide

Introduction

This guide contains a brief description of the purpose of all the inputs in the shell that I use to construct all my auto-trading EA's. They will not all be a part of an individual EA, so ignore any that you do not see in the inputs window when starting up the EA.

The use of 'criminal' in my forum to describe the brokers, is only semi-humorous. The behaviour some of these cowboys is shocking. Use of 'criminal' or 'crim' in this document refers to these people. Note that it **does not** apply to Global Prime, who are scrupulously honest.

Inputs

Enter all pip inputs as pips. Forget the x digit crap so beloved by the crims; my EA's all convert your pips into the points required by your crim. We are indebted to Lifesys for the code.

• **General Inputs**

- **TradingTimeFrame:** the chart time frame you wish to trade.
 - The default of zero means the current chart, so changing time frames might muck up the ea.
 - If set to one of the standard chart tf's, the ea will continue to trade that tf even if you change the chart tf.
- **EveryTickMode:** this will appear in ea's that only trade at the opening of a new candle. If enabled, it allows the ea to trade at every tick.
- **Lot:** your chosen lot size. Make sure your lot size is acceptable to your criminal.
- **RiskPercent:** this tells an EA to calculate the lot size as a risk percentage of your account balance. It uses the pips count in StopLossPips.
- **LotsPerDollopOfCash:** you can have your lot size automatically calculated this lot size per amount of cash in the account balance or equity. The default settings would deliver 0.01 lots per \$1,000. A zero input turns this feature off.
- **SizeOfDollop:** the cash increments used.
- **UseBalance:** use the account balance for the calculation.
- **UseEquity:** use the account equity for the calculation.
 - Example of use, choosing the equity:
 - equity = \$2133.56
 - LotPerDollopOfCash = 0.01.
 - SizeOfDollop = \$1,000.
 - Calculated lot size is 0.02.
- **StopTrading, TradeLong and TradeShort:** these allow you to control the trading direction or even stop trading altogether if all you want this EA to do is manage an open trade.
- **TakeProfitPips:** your take profit.
- **StopLossPips:** your stop loss.
- **Magic number and trade comment:** leave these alone unless you know what you are doing.
- **IsGlobalPrimeOrECNCriminal:** set this to true if your criminal insists on two-stage order-sending. This is irrelevant if you do not use StopLoss and TakeProfit. Remember that IBFX are ECN even though they do their best to hide this fact and stop all their 'valued clients' actually sending any trades; the EA has code to detect IBFX as the crim and set this input accordingly. It will also detect Global Prime accounts.

- **MaxSlippagePips:** 'slippage' is the price changing in between you sending off your trade and it being accepted by the market maker on the other side of your trade. The trade is cancelled if slippage exceeds this figure.
- **Safety features**
 - **MinMinutesBetweenTrades:** is the post close sleep period. The EA scans the order history tab for the latest closed trade, and will not attempt to trade again until MinMinutesBetweenTrades has passed.
 - **MinMinutesBetweenTradeOpenClose:** occasionally, a strange concatenation of coding bug, poor logic or criminal behaviour by your market maker will cause trades to open then close immediately for the loss of the spread. This can occur hundreds of times, draining your account. The EA scans your platform's History tab and triggers a 'rogue trade' event if it finds a trade that has opened and closed within MinMinutesBetweenTradeOpenClose. You will hear an alert and the EA will show a flashing message that says, " ***** ROBOT SUSPENDED. POSSIBLE ROGUE TRADING ACTIVITY. REMOVE THIS EA IMMEDIATELY ***** "
- **Hedging:** Hedging and the grid are linked. If using hedging and using the grid, then the EA will send grids in both directions when an initial trade trigger arises. If only using//the grid, then only the grid in the direction of the initial trade will be sent.
 - HedgeProfitPips: your pips target for an unbalanced hedged position.
 - HedgeProfitCash: your cash target for an unbalanced hedged position.
 - You can set a value for both and the first one to hit will close the position.
- **Grid inputs:**
 - UseGrid: tells the EA to send a grid of trades with the initial trade.
 - GridSize: the number of stop/limit orders to place – by default 5 above market for a buy and 5 below for a sell. The EA will send both if you are using the hedging feature.
 - DistanceBetweenTradesPips: this is the distance from the current Bid price to the open price of the first pending trade, and then the distance in between subsequent trades. There is the facility to use ATR to make this a dynamic calculation and I shall describe how to use it further down. I use it, so the default value here is 0.
 - CloseOnOppositeSignal: tells the EA to close/delete buy/stop/limit orders on an HGI sell signal; vice versa for sells.g
- **Offsetting:** this means offsetting a larger losing trade with a number of winning trades, always at a cash profit. There are three kinds: simple one-sided offsetting; complex two-sided offsetting; complex one-sided offsetting. The purpose of offsetting is to reduce draw down by reducing the number of open trades that are not in profit:
 - Simple Offsetting:
 - A simple offset of the loser at the top by the biggest winner at the bottom for buy trades; vice-versa for sells. Imagine there are 4 market buys and that no 4 has just opened:
 - No 4, the top, is the spread in the red.
 - No 3, is 20 pips in the green.
 - No 2, is 40 pips in the green.
 - No 1, the lowest, is 60 pips in the green.
 - Imagine the market retraces and the latest buy at the top of the pile is DistanceBetweenTradesPips in the red. Now the position is:
 - No 4, the top, is 20 pips in the red.
 - No 3, is at breakeven.
 - No 2, is 20 pips in the green.

- No 1, the lowest, is 40 pips in the green.
 - The top trade is -20. The bottom trade is + 40. Close them both and net 20 pips. There is code to ensure that this only happens when the combo can be closed in cash profit.
 - Complex double-sided offsetting
 - This is offsetting a group of trades from the profitable side of a hedged position, against a loser from the other side.
 - Imagine there are 5 buys open and the group is in profit; there are 3 sells open and the group is in loss:
 - Imagine that some or all of the buy trades have a combined cash profit that will allow the buys and the worst sell trade to be closed at an overall profit. Close the relevant number of buys and the sell.
 - Complex single-sided offsetting.
 - This takes care of the 'leaky toilet' market.
 - Imagine there was an HGI buy signal that triggered 3 trades before the market crashed'
 - Imagine the market has fallen a long way.
 - Lots of sells opened and closed by the simple offset method, or the sells were closed as a group by an of the closure features.
 - The market will rise eventually - it always does. HGBnG has already sent a number of buy stops, which start to fill.
 - The lowest buys in the grid become more and more profitable.
 - The loss on the highest buy trade lowers.
 - Eventually we reach the stage where a bunch of winners at the bottom can combine to close the highest loser at a combined overall profit. Stunning stuff from Bruster.
 - The inputs:
 - UseOffsetting: enables/disables offsetting.
 - AllowComplexSingleSidedOffsets: not everyone wants this, so this input allows you to turnit off.
 - MinOpenTradesToStartOffset: the smallest number of trades you want open before HGBnG goes looking for offsets. Less than 4 makes no sense.
- **ATR** (Average True Range (Terminal\Navigator window\Indicators\Oscillators) inputs:
 - UseAtrForGrid: tells the EA to use ATR to calculate DistanceBetweenTradesPips.
 - GridAtrTimeFrame: the time frame to use for your ATR-based calculation.
 - GridAtrPeriod: the ATR indi Period input. My 20 period D1 ATR means I am using it calculated over the previous trading month.
 - GridAtrMultiplier: most traders using ATR multiply the basic figure to adapt to their use. I want straight ATR for my grid size, hence the default of 1.
 - There are equivalent inputs that allow you to use dynamic take profit and stop loss values. Note that you do not want a stop loss if you are using the stop orders only method that can result in hedging. You can still have one when the initial grid is sent, then subsequently HBG will remove all stop losses from hedged positions
- **3 Semafor Inputs:**
 - CloseTradesOnRelevantSemafor: tells the EA to close buy trades following a high semafor, and sell trades following a low semafor. He also deletes stop and limit orders.
 - CloseImmediatelySemaforAppears: tells the EA to close trades immediately a

relevant semafor appears on the current candle. The rationale is that the hilo of the previous 34 > H1 candles is the hilo of more than a week of trading. A lot of traders will have their take profit at these levels, and I have seen the profits of a number of grids drop substantially as the market begins an immediate retrace.

- ReplaceWinnersGrid: tells the EA to resend a buy stop grid following closure by a high semafor signal, and a sell stop grid following closure by a low semafor signal. Grids will start DistanceBetweenTradesPips away from the Bid.
- DeleteAndReplaceLosersGrid: tells the EA to delete any stop orders on the losing side of the hedge, and replace it with GridSize orders starting at stanceBetweenTradesPips away from the Bid.
- Period3: this is the only 3 Level indi input that need concern you. Remember to change it in the EA if you change the indi setting. My advice to you is: leave it alone.
- **'Stealth technology'** The EA can hide your real stop loss and take profit from your criminal:
 - **HiddenPips:** the EA sends a 'hard' stop loss and take profit with the trade. Your inputs have HiddenPips added to them. The EA draws sl and tp lines on your chart at the correct values, and closes the trade when one of the lines is crossed. It will respond appropriately if you move the lines manually.
- **The Moving Average:** Nanningbob's trend detection filter.
 - Works like this:
 - time frame = H4: Period = 240: applied to the Open price.
 - Market > the the MA: buy trades only.
 - Market < the the MA: sell trades only.
 - **MaTF:** Moving Average Time Frame. Defaults to H4.
 - **MaPeriod:** Moving Average Period. Defaults to 240.
 - **MaShift:** for highly specialised use and will rarely be visible.
 - **MaMethod:** Moving Average Method. Defaults to LWMA.
 - **MaAppliedPrice:** Moving Average Applied Price. Defaults to Open.
- **Slope:** The Slope indi measures the strength of a pair's movement. You need to understand how to use it and this brief description does not help very much if you lack understanding. The information it provides is this:
 - ≥ 0.4 : the market is rising but not necessarily strongly. Look to take profit on buy trades.
 - ≥ 0.8 : this means buy and hold because the move is a strong one.
 - ≤ -0.4 the market is falling but not necessarily strongly. Look to take profit on sell trades.
 - ≤ -0.8 : this means sell and hold because the move is a strong one.
 - > -0.4 to < 0.4 means the market is ranging.
 - **Inputs:**
 - **HtfTimeFrame:** your chosen higher time frame. This defaults to the D1. An input of zero turns off higher time frame Slope.
 - **LtfTimeFrame:** your chosen lower time frame. This defaults to the H4. An input of zero turns off lower time frame Slope.
 - The remaining Slope inputs will be obvious if you understand the indi. They will be set to the recommended defaults, so leave them alone unless you know what you are doing.
- **CSS:** Currency Slope Strength measures the strength of each individual currency in the pair. This utterly stunning indicator was coded by Baluda and is a breathtaking addition to our trading armoury. It offers us the facility to buy a pair only when the first currency in the pair is getting stronger and the second weaker. Vice-versa for a sell. Go to Bob's thread at

<http://www.stevehopwoodforex.com/phpBB3/viewtopic.php?f=38&t=1481> and read "10.4 CSS info page.pdf" to read details of how this indi works, but to summarise, the indi gives you this information about each of the two individual currencies that make up the pair::

- > 0 and the angle of the representative line is rising: currency is strengthening and the rate of strengthening is accelerating.
- > 0 and the angle of the representative line is falling: currency is still strengthening but the rate of strengthening is slowing.
- < 0 and the angle of the representative line is falling: currency is weakening and the rate of weakening is accelerating.
- < 0 and the angle of the representative line is rising: currency is weakening but the rate of weakening is slowing.
- **Inputs** – these need to be the same as those you use with the indi:
 - UseCSS: turns this filter onn/off.
 - AutoSymbols: tells the indi to detect the symbols offered by your criminal automatically and include them all in the strength calculation..
 - symbolsToWeigh: the list of symbols to use in the strength calculation if AutoSymbols is 'false'.
 - MaxBars: cpu processor saver. Maximum no of candles over which to make the calculations.
 - AddSundayToMonday: for those of you with a Sunday candle, converts this to represent the open of the Monday candle.
 - TimeFrame: explained in the inputs instructions.
 - IgnoreFuture: not a clue what this is about, so leave it alone.
- **Trading hours.** This is fantastic functionality provided by Baluda.
 - Sort these out for yourself, using the information here. *Never* ask questions about it in my threads. You will regret doing so should you ignore this warning.
 - use the 24 hour clock format.
 - Enter trading periods in your own local time. Forget broker server time and GMT offsets.
 - Enter as many trading times as you want:
 - precede trading start times with a '+' e.g. +08.00
 - precede trading stop times with a '-' e.g. -13.15
 - separate each value with a comma. **Do not leave spaces.**
 - An example. Imagine you want to trade between 7 and 11 am and 1 and 5.30 pm, your input will look like this:
 - +07.00,-11.00,+13.00,-17.30
- **Trade balance filters:** these help you to avoid entering trades that could prove detrimental if the market turns against you for a particular currency, and to avoid entering trades at news-release times.
 - **UseZeljko:** named after Zeljko who corrected the code for this filter and made it work. This filter ensures 'balanced' trading. The easiest way to describe it is to use hypothetical trades. Imagine that:
 1. this EA buys GBPUSD.
 2. this EA buys GBPJPY. You are now heavily exposed to GBP.
 3. Something unexpected happens (and something unexpected *always* happens in Forex) and the pound plummets, dropping like a stone into the abyss. Both your trades scream into huge drawdown.
 4. To avoid this, having taken the GBPUSD trade, this EA will not buy another GBPxxx pair. Imagine instead that a Sell GBPJPY trade arises, just before the market plummets. This time, your GU trade is screaming into the abyss, but your GJ trade is going stratospheric. One trade

'balances' the other in the event of something dramatic happening.

- **OnlyTradeCurrencyTwice:** works in conjunction with UseZeljko. Again, imagine the above scenario nos 1 & 4. Now you have a GU Buy and a GJ sell open – perfectly balanced trades. If you now further trade any pair involving GBP, you will unbalance your trading again, leaving you exposed to unexpected events. This filter prevents a third trade being opened involving GBP.
- Note: both UseZeljco and OTCT work more deeply than the example I have just given. For example, now you have a GU buy open, balanced trading does not allow a further buy xxxUSD trade to open, only a sell xxxUSD – then OTCT kicks in again..... Got a headache yet?
- **Swap filter:** some pairs have dreadful swap in one direction. This filter allows you to avoid trading pairs in the direction that would cost a fortune in swap. How much relevance this has to a system that could follow a trend for hundreds of pips is open to debate, but once you have seen one of these adverse-swap pairs hang around going nowhere for a couple of weeks, you will see why a lot of us want nothing to do with them.
- **Margin checks:** these help avoid over-trading by limiting the number of trades that can be opened. this EA will make the calculations before sending a trade and abort if there is insufficient margin to allow further trading. There are two to chose from; the default indicates my preference.
 - **Scoobs** check: scooby-doo is a former pro trader with the big banks; we have benefited hugely from his advice. This filter compares the current account margin with the free margin divided by 100, and aborts the trade if the margin is greater than the result of this calculation.
 - **ForexKiwi** check.ForexKiwi contributed this filter. It looks at the margin percent figure and aborts the trade if yours is less than the figure you specify in FkMinimumMarginPercent.
- **Average spread inputs:** We do not want an EA trading during a stop hunt. To learn about the crim's stop hunting tactics, go to CJ's thread at <http://www.stevehopwoodforex.com/phpBB3/viewtopic.php?f=59&t=1572>. There is code to calculate the average spread and store it for retrieval every time you restart the bot.
 - The first time you run the ea it will take time to calculate the average spread. The screen will display a message telling you how far into the process it is.
 - **RunInSpreadDetectionMode:** run the EA with this set to 'true' occasionally to make sure the average spread is up to date. The easiest way to force a recalculation is to delete the Global Variable that stores the average. Perform this when you know there are no major news events coming up.
 - Press the F3 key to open the Global Variables window.
 - The relevant GV's begin with the chart symbol then " average spread" e.g. "EURUSD average spread". Highlight the GV and delete it. Close down and restart your platform and RRTnP will detect the need for a recount.
 - **TicksToCount:** the number of ticks to use as the averaging period.
 - **MultiplierToDetectStopHunt:** this multiplies the average spread and pauses the bot if the spread exceeds this.
 - The EA keeps a running tally of the spread and recalculates the average every 500 ticks. The chart includes a display of the average, along with a notification of the widest spread since the EA was last started/restarted.
- **Chart snapshots after opening and closing trades:**
 - The EA can take a picture of your chart when it opens or closes a trade. Use this to take pictures if you suspect that the EA has not behaved as expected. There is a section of inputs just underneath the minimum pips section, with

inputs to turn this feature on/ off and to adjust the height and width of the snap. Files are saved with the name "ChartScreenShot" and the ticket number, when the EA opens or closes a trade. Navigate to the files via File/Open Data Folder/MQL4/Files. Remember to delete these files from time to time to avoid clogging up your disk drive.

- **Email things:** these features need enabling via Tools|Options on your platform.
 - **EmailTradeNotification:** tells the EA to email you an alert when it has sent a trade.
 - **SendAlertNotTrade:** tells the EA not to send a trade when it discovers a trigger. Instead it will:
 - sound an alert on your platform.
 - Send you an alert via email.
 - **AlertPush:** sends either/both the above alerts and sends a 'push' to the latest mobile devices such as iPad etc.

Trade Management

The remaining inputs are all about individual trade management. Management is a cut-down module from Multi-purpose trade management EA available from <http://www.forexfactory.com/showthread.php?t=89371>. The full management EA has a wide range of extra features, and there is a User Guide to describe it.

Features included here:

- **Break even settings:** set a break even stop loss after the price reaches the setting in BreakEvenPips. You can use this in conjunction with the Part-closure routine (details later), as well as a stand-alone routine.
 - **BreakEven:** set to true to enable this facility.
 - **BreakEvenPips:** the number of pips you want the market to move in your favour before setting the stop loss to the order entry price, ensuring the trade cannot turn into a loss.
 - **BreakEvenProfit:** will add this to the stop loss to a buy order, subtract it for a sell order. My default of 2 pips means the sl is set to break even + 2, ensuring a minimum of 2 pips profit. Set it to 0 if you do not want this feature.
 - **HalfCloseEnabled:** will close half the trade when the market reaches your breakeven point. It is up to you to ensure that your lot size allows this.
- **Jumping stop loss settings:** this will jump the stop loss by JumpingStopPips when the price moves in your favour by that number of pips. Many traders consider this to be a better option than a straight trailing stop. The first time this option is triggered by the market price, it will set the stop loss to break even. After that, it will increment the sl by JumpingStopPips every time the market moves sufficiently in your favour.
 - **JumpingStop:** set to true to enable this facility.
 - **JumpingStopPips:** the number of pips to jump. For example, my default of 300 works like this:
 - Market price hits order open price + 300: moves sl to break even.
 - Market price hits order open price + 600: moves sl to + 300.
 - Market price hits order open price + 900: moves sl to + 600.
 - **AddBEP:** adds BreakEvenPips to the break even if set to 'true'.
- **Candlestick jumping stop.** This jumps the stop at the close of a candle:
 - **UseCandlestickTrailingStop:** turns this on/off.
 - **CstTimeFrame:** this allows you to use a different time frame to that of the chart. Use integer values to correspond with your chosen time frame I.e. 1 for M1, 240 for H4, 1440 for D1 etc.
 - **CstTrailCandles:** the number of candles ago to use as the trail. For example, you

are in a buy trade and want the stop loss to trail the default of 1, then the EA will set the stop at the low of the previous candle, so long as this is higher than the current stop loss.

- **TrailMustLockInProfit:** tells the EA to start moving the stop loss only when it will be moved to > break even.
- **Trailing stop loss settings:** works like the conventional trailing stop you can enter into the MT4 platform.
 - **TrailingStop:** turns this on/off.
 - **TrailingStopPips:** your trail distance.

Chart feedback display.

The shells place information about the EA's inputs on the chart. You have the option to use the general Comment text, which you cannot personalise, or the text function provided by Paul Bachelor (lifesys) at SHF.

- **DisplayAsText:** tells the EA to use Paul's display function. This puts text into labels drawn on the chart; these sometimes split words and so sometimes appears a little strange.
- **KeepTextOnTop:** stops the chart candles from obscuring Paul's text.
- The remaining inputs control the start point, font and colour of the text in Paul's labels. Play with these to personalise your feedback.

Disclaimer and Risk Disclosure:

Trading foreign exchange on margin carries a high level of risk, and may not be suitable for all investors. The high degree of leverage can work with as well as against you. Before deciding to invest in foreign exchange you should carefully consider your investment objectives, level of experience, and risk appetite. The possibility exists that you could sustain a loss of some or all of your initial investment and therefore you should not invest money you cannot afford to lose. You should be aware of all the risks associated with foreign exchange trading, and seek advice from an independent financial advisor should you have any doubts.

I will put this a tad more bluntly:

Most Forex traders lose all their money.

- Using this EA in trading Forex does not guarantee success.
- Trading with this EA could lead to serious financial loss.
- Trading this EA without understanding its underlying trading strategies *guarantees* traders will lose their money.

Good luck. Have fun.