Ambrosia EA

Instruction manual

Overview

Ambrosia is not a strategy, it is a tool that can significantly automate both your entries and your exits. How profitable you are will be determined by:

- which pairs/instruments you choose to trade;
- where you draw the boxes (which are used to determine the levels Ambrosia will use in placing entry/TP/SL);
- the parameter settings that you use.

Ambrosia allows many options for both entries and exits. It can place market and pending orders that support both pullback and breakout type entries, optionally timing entries around your nominated price/volume action techniques, and time considerations; many different SL and TP/RR options; five different position sizing calculations; trailing SLs, move SL to BE, partial exits (scaling out); limiting exposure across different zones, instruments, currencies and account drawdown; and much more.

Ambrosia is highly flexible and configurable. The number of options available may seem daunting, but you can use MT4's Load/Save buttons to save frequently used settings, and then recall them immediately, whenever necessary.

Ambrosia is designed primarily for trading pullbacks or reversals. The analyst/trader places rectangles ('boxes') on his MT4 charts in zones where he expects price to reverse, and tells Ambrosia (via its parameter settings) which price/volume patterns to act upon, in/around those zones.

For a valid BUY signal, price must fall **downward** into a box from **above**, and the candle must close anywhere above the **distal** edge (the lower edge for a buy setup) of the box. If a candle that closes meets all of other requirements (specified in the parameter settings), then it is a valid buy signal, and the default action taken by Ambrosia is place a **market** buy at the opening tick of the next candle. By default, the SL is placed relative to the distal edge of the box, and the TP is set at 2R, although the parameter settings offer many different options for SL and TP (including the option to omit them altogether).

For a valid SELL signal, everything is the mirror image, i.e. price must rise **upward** into a box from **below**, and so on.

Those are the basic pullback or reversal entries. Buy boxes are normally placed below the current price, and sell boxes above; however, you can do the reverse, to capture situations where price has spiked through the box, and then returned to it from the opposite side (the turncoat/flipover/trapped trader situation). Additionally, Ambrosia can be set to also place both pending limit and stop entry orders; and also perform breakout trades. All of these setups are explained in detail in the relevant sections that follow.

Box info (Rectangle name and description)

Creating an Ambrosia box is as simple as inserting a rectangle on your MT4 chart, and placing the *BoxIdentifier* token specified in the EA settings dialog (default is 'amb') in the first few characters of the Rectangle's **description**. In this way, the Ambrosia EA knows that this box represents a zone around which it may place orders, if a closing candle creates a valid signal.

MT4 automatically generates a **name** for the box (e.g 'Rectangle 12345'). Ambrosia includes this name in the Comment field of any orders that it places, so that it can later link the order to the box that caused its creation, when it manages the exit for the trade. The Comment is likewise used to count the number of orders created by a box, when it comes to limit risk exposure via the *MaxOrdersPerBox* setting.

You can create multiple boxes both above and below the current price, on the same chart. These can cause multiple orders (e.g. to facilitate 'scaling in' to a position, or same-pair hedging) to be generated from different levels in the chart. Ambrosia treats each box, and any orders generated from that box, as an entirely separate entity. Alternatively, setting *MaxOrdersPerBox* to a value greater than 1 can allow multiple orders to be generated from the same box, each time a valid signal candle occurs.

Parameter setting hierarchy

In addition to the EA dialog, which serves as the defaul t settings for all boxes on the chart, individual boxes can obtain their own unique parameter settings from either (1) a parameter file in the **.../MQL4/Files** folder, and/or (2) entries made in the Rectangle's description field, as explained below. Priority operates according to the following hierarchy:

1. If a setting (e.g. SL) is specified in the Rectangle's description field, this is used (i.e. it overrides everything else). In this way, you can create settings that are unique for an individual box. The entries may be separated by a forward slash (/), backslash (\) or pipe (|) character.
   The **first entry** is the box identifier (e.g. 'amb'), which must match that used in the *BoxIdentifier* token specified in the EA settings dialog.
   The **second entry** overrides the *RiskPerTrade*.
   The **third entry** overrides the *AllowableOrders* (B=buy, S=sell, etc).
   The **fourth entry** overrides the *TPmethod*.
   The **fifth entry** overrides the *SLmethod*.
   The **sixth entry** overrides the *BVCandleTypes*.
   You can leave entries empty/null between the separators, in which case Ambrosia will use the corresponding setting in any specified file (if existing – see point 2), or the MT4 EA diaog (see point 3).
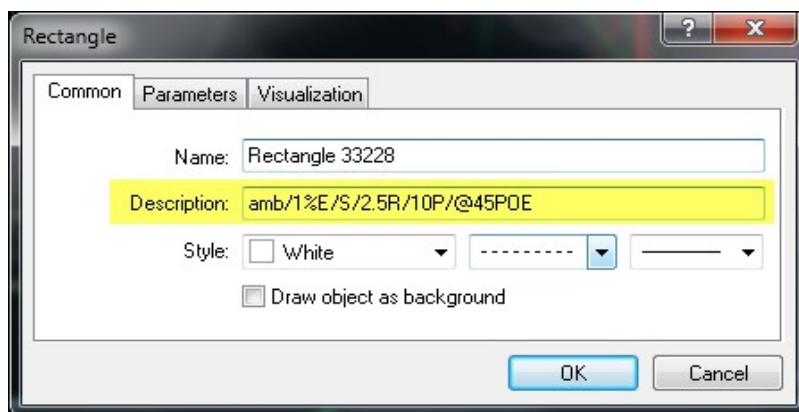
In the above example, 'amb' is the box identifier, risk is set at 1% of equity, only SELL orders (price must rise upward into the box) will be taken, the TP is 2.5R, the SL is 10 pips from the entry, and the signal candle must be one of: BV bull climax, BV bear climax, pinbar, outside bar or engulf body. The rest of the settings come from the EA's MT4 dialog box. See 'Parameters' section below.

2. If you specify a file name in the Rectangle's description field (e.g. amb'myfile.set'), and the file (**myfile.set**) exists in the **.../MQL4/Files** folder, then any settings that are specified in the file will be used. In this way, you can apply settings that are relevant to a certain setup type, risk profile, etc, to any number of different boxes. The settings in the file must appear in the same format as those used in any MT4 **.set** file. Example:

```
RiskPerTrade=1
AllowableOrders=S
UseBoxTimeConstraints=1
BVCandleTypes=@345poes
BVCandleTimeframe=+0
BVLookbackCandles=15
BVFuzzFactor=1.00000000
MinReversalBarPips=1
MinBVvelocityIntoZone=
MinKongBarPips=999999
PinbarMinWickPercent=60.00000000
PinbarCheckColor=0
MaxPipsEntryFromBox=15L
EntryConfirmationPips=0
MaxSpreadPips=999999.00000000
SLmethod=
TPmethod=1.3438
AdjustForSpread=1
CloseOppositeOrders=1
MaxOrdersPerBox=1
MaxOrdersPerSymbol=999999
MaxOrdersPerCurrency=999999
MagicNumberBuy=-1
MagicNumberSell=-1
NumberOfAttempts=12
SecondsBetweenAttempts=0.50000000
ArrowColorBuyEntry=32768
ArrowColorSellEntry=255
SnapshotFile=Ambrosia screenshots\#amb█
MaxDrawdownAllowed=0,100%
```

3. The settings typed into the MT4 EA dialog box are used as the base default:
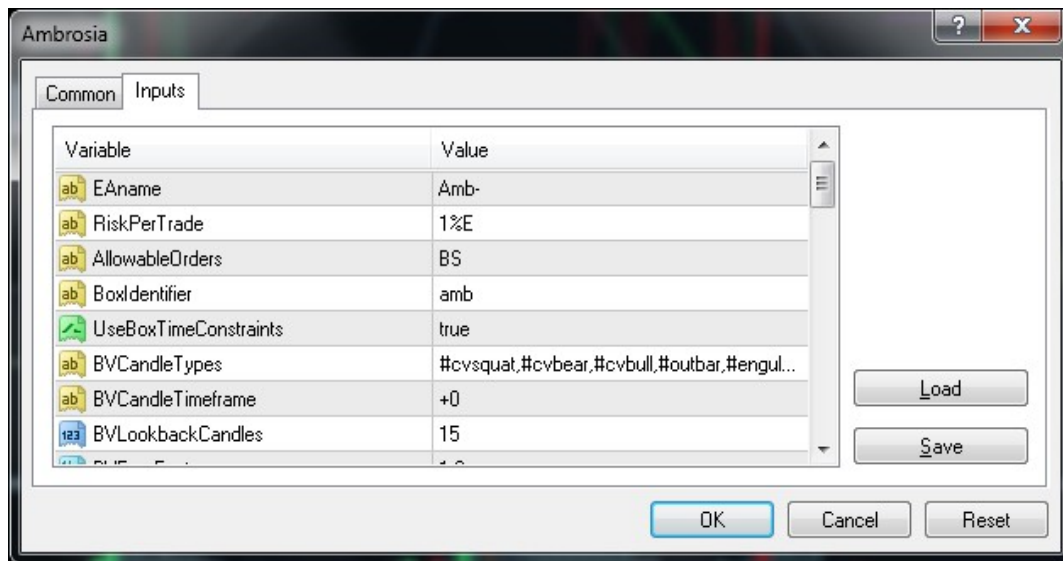
Parameters

Note: unless stated otherwise, text can typed in any order, and upper and lowercase can be used interchangeably, e.g. to risk 1.5% of your account equity, you could enter *RiskPerTrade* as any of '%1.5e' 'E1.5%' or '1.5e%'
Valid entries are shown enclosed in single quotes, but should be typed **without** the quotes.
The symbol N is used to represent any valid number, e.g. '-3' '0.667' '-157.366'
Negative numbers should be entered with a leading minus sign.

EA name
This should be left as 'Amb-'
It becomes the prefix in the Comment field of each order placed.

RiskPerTrade
Choose any one of the five permissible options (# $ % : &)
- 'N' or 'N#' — the order size will be N lots.
- '$N' — risk will be limited to $N (where $ = whatever currency your account is denominated in). If there is no stoploss specified, the order size will be N lots.
- 'N%' or 'N%B' — risk will be limited to N% of account **balance**. You can substitute 'E' or 'F' for the 'B' to limit risk to N% of your account **equity**, or **free margin**, instead. If there is no stoploss specified, the order size will be N lots.
- 'N:' or 'N:B' — risk will be limited to approx N% of account **balance** per (approx) 100 pips (i.e. this is sizing at N:1 'true leverage'). You can substitute 'E' or 'F' for the 'B' to limit risk to N% of your account **equity**, or **free margin**, instead. Use of a stoploss is optional.
- 'N&' or 'N&B' — risk will be limited to approx N% of account **balance** per X pips, where X is the instrument's 30-day ADR (or whatever value you enter into *ADRdays*).

You can substitute 'E' or 'F' for the 'B' to limit risk to N% of your account **equity**, or **free margin**, instead. Use of a stoploss is optional.

Martingale option (included, but NOT necessarily recommended!)
You can specify a list of up to 50 *RiskPerTrade* entries, separated by commas, which represent different sizing steps following losses **in the current chart's pair/instrument**.

- If the last trade in that pair/instrument was a **win**, then the **first** specified risk/sizing value in the list is used.
- If there has been **one loss** following the most recent win, the **second** risk/sizing value is used.
- If there have been **two losses** following the most recent win, the **third** risk/sizing value is used, and so on.
- If/when the list of risk/sizing values is exhausted, it re-starts at the beginning again, thus capping the martingale after a given number of losses; and then cycles through the list repeatedly, if necessary, until a winning trade in that pair/instrument occurs.
- The values in the list may be any of those detailed above, and may be mixed in type (# $ % : &), increasing or decreasing (reverse martingale), using whatever numeric progression you wish.

Allowable Orders

Choose any one of the five permissible options:

- 'B' — only BUY orders will be created, and only if price enters a designated Ambrosia box downward from above (i.e. working backwards from, but not including, the signal candle, a candle low above the box occurs before a candle high below the box). Hence this is effectively a **reversal/pullback buy** from what you believe is a support/demand/oversold area. The box should normally be plotted below current price; however, if plotted above current price, this can be used to enter at turncoat support (trapped traders).
- 'S' — only SELL orders will be created, and only if price enters a designated Ambrosia box upward from below (i.e. working backwards from, but not including, the signal candle, a candle high below the box occurs before a candle low above the box). Hence this is effectively a **reversal/pullback sell** from what you believe is a resistance/supply/overbought area. The box should normally be plotted above current price; however, if plotted below current price, this can be used to enter at turncoat resistance (trapped traders).
- 'BS' — both BUY and SELL orders may be created from the same box (BUY order if price enters downward from above; sell order if price enters upward from below).
- 'BO' — the O (override) means that the direction price enters the box will be ignored. This makes it possible to plot a box above current price, to BUY on an **upside breakout**, if/when price closes above the bottom of the box.
- 'SO' — the O (override) means that the direction price enters the box will be ignored. This makes it possible to plot a box below current price, to SELL on a **downside breakout**, if/when price closes below the top of the box.
- 'C' — include '**C**hop test': you can also include a C anywhere in the setting, e.g. BC or SC, to have Ambrosia perform a 'chop test'. This test determines whether a box/zone has been 'washed out' if price has blown through it previously, within the time constraints (between the LH and RH edges) of the box. Specifically, a BUY signal is invalidated if one or more candle(s) exist in their entirety **below** the box, and a SELL

signal is invalidated if one or more candle(s) exist in their entirety **above** the box. If there is no 'C' in the setting, this chop test will not be performed.

Note: to facilitate a **straddle**, use two Ambrosia boxes (a BO above the current price, and a SO below current price).

To disable the EA temporarily, without removing it from the chart, set *AllowableOrders* to '', i.e. an empty string means that neither buy nor sell orders will be permitted.

If you also include a number (with or without a decimal point) in *AllowableOrders*, this number will be stripped out and assumed to be the maximum leverage that you wish to allow (let's call this 'MaxAllowLev'), and the number of lots in the position size will now be the LOWER of the normal RiskPerTrade-based calculation, and
MaxAllowLev x account_size / 100,000
where account_size can be either balance, equity, or free margin, depending on whether you have entered B, E or F in *RiskPerTrade*. (If you don't include a number in *AllowableOrders*, then the position size will simply be established by the normal *RiskPerTrade*-based calculation).
Example: if you want to restrict your position sizes to a maximum leverage of 2, you would simply enter 'B2' into *AllowableOrders* instead of just 'B'.

Box Identifier
The text you type here is used to identify valid Ambrosia boxes. Boxes with this same signature text typed as the **first** parameter in their object description field will be used by Ambrosia to place potential orders; any other boxes on the chart will be ignored.

UseBoxTimeConstraints
- If TRUE — the signal candle must occur , time-wise, within the plotted box. Signal candles occurring before the LH edge, or after the RH edge, of the box will be ignored. This makes it possible to prevent orders being placed at certain times of the day, e.g. low volatility, high impact news. To skip over such a period, plot one box to the left of the period, and another one to the right.
- If FALSE — the signal candle may occur at any present or future time on the chart.

BVCandleTypes
There are three categories of candle types that may be specified here, designating the valid types of signal candle. Candle types that are not specified are ignored. Items from any category/ies may be included in the list. Items should be separated by commas.

1. Better volume candles:
- '#cvsquat' or '#pink' or '#magenta' — these are the pink/magenta BV candles that appear on your chart. Both their [volume x height] and [volume ÷ height] are the highest for the last *BVLookbackCandles* candles. (Note: cv = climax volume).
- '#cvbull' or '#green' — these are the green BV candles that appear on your chart. Their [volume x height] is the highest for the last *BVLookbackCandles* candles, and they closed above the candle's midpoint.

- '#cvbear' or '#red' — these are the red BV candles that appear on your chart. Their [volume x height] is the highest for the last *BVLookbackCandles* candles, and they closed below the candle's midpoint.
- '#squat' or '#brown' — these are the brown squat BV candles that appear on your chart. Their [volume ÷ height] is the highest for the last *BVLookbackCandles* candles.
- '#low' or '#white' — these are the white BV candles that appear on your chart. Their [volume] is the lowest for the last *BVLookbackCandles* candles.
- '#none' or '#gray' — these are the gray BV candles that meet none of the above categories.
- '#all' or '#any' — this means that ANY candle is a candidate signal candle (but it must still meet all other conditions). By specifying any candle, there is no need to include any of the tokens from categories 2 or 3.
- ALL better volume candle types must also meet the *MinBVvelocityIntoZone* criteria.

In addition to better volume candles, you may also specify any or all of the following as valid signal candles:

2. <u>Price action reversal bars</u>:
- '#pinbar' — this will include any pinbar as a valid signal candle. Pinbars are also subject to the *MinReversalBarPips*, *PinbarMinWickPercent* and *PinbarCheckColor* settings, but NOT *MinBVvelocityIntoZone*. A pinbar must be a bullish (close>open) pinbar to generate a BUY signal, and a bearish (close<open) pinbar to generate a SELL signal. In addition to meeting all other conditions, a bullish pinbar must have a lower low than the lows of all of the 4 preceding candles, and a bearish pinbar must have a higher high than the highs of all of the 4 preceding candles.
- '#outbar' — this will include any outside bar as a valid signal candle. Outside bars are also subject to the *MinReversalBarPips* setting, but NOT *MinBVvelocityIntoZone*. An outside bar must be bullish (close>open) to generate a BUY signal, and bearish (close<open) to generate a SELL signal. It must also meet all of the global conditions.
- '#engulf' — this will include any engulfing body candle as a valid signal candle. Engulfs are also subject to the *MinReversalBarPips* setting, but NOT *MinBVvelocityIntoZone*. An engulf must be bullish (close>open, and close>prior candle's open) to generate a BUY signal, and bearish (close<open, and close<prior candle's open) to generate a SELL signal. The candle's open must be within two pips up/down of the prior candle's close. It must also meet all of the global conditions.
- '#kngbar' — a kong bar is any bar whose height (high to low) is at least *MinKongBarPips* pips. A bullish kong bar (close>open) can generate a BUY signal, while a bearish kong bar (close<open) can generate a SELL signal.
- '#pclose' — a valid **bullish** proximal close occurs when the last candle close (on the *BVCandleTimeframe*) is higher than the lowest high of the prior *ProxCloseLookback* candles. This generates a BUY signal.
  A valid **bearish** proximal close occurs when the last candle close is lower than the highest low of the prior *ProxCloseLookback* candles. This generates a SELL signal. All global conditions (see below) must also be met.

3. <u>Swing failure pattern (SFP)</u>:
- '#sfp' — a bullish SFP occurs when a candle forms a low below the plotted box, and then also closes above the bottom of the box (which is a global condition, anyway),

creating a possible BUY signal. A bearish SFP occurs when a candle forms a high above the plotted box, and then also closes below the top of the box (which is a global condition, anyway), creating a possible SELL signal.

Global conditions: in addition to meeting the criteria of all of your selected candle types (in categories 1 thru 3), the following conditions must **always** be met also —
- For a BUY signal candle, (1) the candle's low** must be below the top of the plotted box, and (2) the candle's close must be above the bottom of the box. Price must also approach the box as described in the *AllowableOrders* section above.
- For a SELL signal candle, (1) the candle's high** must be above than the bottom of the plotted box, and (2) the candle's close must be below the top of the box. Price must also approach the box as described in the *AllowableOrders* section above.

[** the low/high of the candle, or any one of the lows/highs of prior candles in the *Allowable Lookback* setting].

[**Strategic considerations**: point (1) ensures that the candle reaches the box; point (2) protects the trader against a move that spikes directly through the box. The candle types offer protection against sideways or inconsequential 'drift' causing a poor entry while price travels through the box.]

In addition to everything outlined above, for an order to be created, the *MaxSpreadPips*, *MaxPipsEntryFromBox*, *MaxOrdersPerBox*, *MaxOrdersPerSymbol*, and *MaxOrdersPerCurrency* conditions must also be met (see below).

Shorthand alternative: as an alternative to #squat, #outbar, #sfp etc
you can enter a **@** character, followed by any of the following
0 = #none
1 = #low
2 = #squat
3 = #cvsquat
4 = #cvbear
5 = #cvbull
A or a = #all (or #any)
O or o = #outbar
E or e = #engulf
P or p = #pinbar
K or k = #kngbar
S or s = #sfp
C or c = #pclose

No intervening commas are needed, e.g. a valid entry might be '@3450eps'

This shorthand can be entered in any of:
a) the BVCandleTypes parameter in the EA's dialog box
b) the BVCandleTypes parameter in a parameter file
c) the **sixth** entry in a box's object description, i.e.
<BoxIdentifier>/<RiskPerTrade>/<AllowableOrders>/<TPmethod>/<SLmethod>/<BVCandle Types>
(Note that MT4 allows a maximum of 61 characters for any object description)

BVCandleTimeframe

This is the TF for which candles are being examined and processed (i.e. it need not be the same as the chart TF). Valid entries are:

- '+0' (be sure to include the leading + sign) denotes the current chart TF;
- '+1' '+2' '+3' etc denote the next longer TFs available in MT4;
- '-1' '-2' '-3' etc denote the next shorter TFs available in MT4;
- otherwise entering a text value like 'M1' 'M15' 'H1' 'H4' 'D1' uses that TF, locking it in even if you change the chart TF.

The entry criteria are checked on the first tick of the starting candle for your specified TF. The **most recently completed candle** is tested for its validity as a possible signal candle. If all criteria are met, Ambrosia sends a new market** order to the broker.

[** unless *EntryConfirmationPips* is set to value other than 0, in which case a pending order is sent/created].

BVLookbackCandles

The number of candles over which the BV checking is performed. See *BVCandleTypes* section above for more info.

BVFuzzFactor

The default value of '1.0' means that, in order to be a valid signal, the last closed (signal) candle must be the most extreme (i.e. have the largest [volume x height] or [volume ÷ height], or the smallest [volume]) of the last *BVLookbackCandles* candles. See *BVCandleTypes* section.

However, if you enter a value of less than '1.0' (e.g. '0.95'), then the signal candle needs to be only *BVFuzzFactor* (e.g. 0.95) times as large/small as the largest/smallest of the last *BVLookbackCandles* candles.

MinReversalBarPips

The minimum height (from high to low) in pips that a price action reversal bar (outside bar, pinbar, engulf, kongbar) **or SFP candle** must attain, in order to be a valid signal candle.
Note: If an ampersand (&) is typed anywhere in the field, the value is assumed to be an ADR multiple, and is multiplied by a *ADRdays* daily range to convert it to a pip value.

The parameter setting defaults to '1' (1 pip) so that it is does not impose any restriction.

MinBVvelocityIntoZone

This setting consists of two values, separated by a comma:

- The **first value** is the total range (from highest *BVcandleTimeframe* candle high, to lowest low, in pips) that must be attained, in order for the signal candle to be valid.
  [Note: If an ampersand (&) is typed anywhere in the field, the value is assumed to be

an ADR multiple, and is multiplied by a *ADRdays* daily range to convert it to a pip value.]
- The **second value** is the number of candles prior to, and including, the signal candle, over which the highs and lows are being considered.

For example, if you specify '20,4', then, for the signal to be valid, the number of pips between the highest price and the lowest price attained over the last 4 candles, including the signal candle, must be at least 20 pips.

If left empty, the settings default to 1,1 which means that the signal candle must be at least 1 pip in height, i.e. effectively no restriction is imposed by this parameter.

AllowableLookback
This global requirement is the number of candles, earlier than the signal (most recently closed) candle, for which at least one candle must touch, or be inside the Ambrosia box. The default value is 0, which means that the furthermost point of the signal candle itself must touch, or be inside, the box. Hence:
- For a valid BUY signal, the low of any one of the candles within the *AllowableLookback* period must be equal to, or below, the proximal edge of the box.
- For a valid SELL signal, the high of any one of the candles within the *AllowableLookback* period must be equal to, or above, the proximal edge of the box.
NOTE: The lookback period is constrained by the left hand edge of the box, i.e. candles before the box's start time are disqualified from the lookback.

MinKongBarPips
This is the minimum height, in pips, that a candle must be to qualify as a *kong bar*. Any candle in the correct direction of the trade (bullish/bearish) that meets this requirement is a valid kong bar. See the kong bar definition in the *BVCandleTypes* section for detailed info. [Note: If an ampersand (&) is typed anywhere in the field, the value is assumed to be an ADR multiple, and is multiplied by a *ADRdays* daily range to convert it to a pip value.]

The parameter setting defaults to '999999' (999999 pips) so that kong bars are effectively disabled.

PinbarMinWickPercent
This is the minimum percent that the distal (outer) wick of the candle must be, relative to the total height of the candle, to qualify the candle as a pinbar. See the pinbar definition in the *BVCandleTypes* section for detailed info.

PinbarCheckColor
- If TRUE — the candle must be bullish (close>open) to be a valid pinbar in terms of generating a BUY signal, or bearish (close<open) to be a valid pinbar in terms of generating a SELL signal.
- If FALSE — the candle color (bullish or bearish) does not matter.

See the pinbar definition in the *BVCandleTypes* section for detailed info.

ProxCloseLookback

This the the the number of candles used to determine whether a valid (bullish or bearish) proximal close entry pattern has occurred. See the proximal close definition in the *BVCandleTypes* section for detailed info.

NOTE: The lookback period is constrained by the left hand edge of the box, i.e. candles before the box's start time are disqualified from the lookback.

ProxCloseCheckColor

- If TRUE — the most recently closed candle must be bullish (close>open) to be a valid proximal close setup in terms of generating a BUY signal, or bearish (close<open) to be a valid proximal close setup in terms of generating a SELL signal.
- If FALSE — the candle color (bullish or bearish) does not matter.

MaxPipsEntryFromBox

Normally, if all required conditions are met, a **market order** is sent on the open (first new tick) of the candle following the signal candle. However, if this entry is more than the specified number of pips from the proximal edge of the box (above the upper edge of box, for a buy signal; below the lower edge of the box, for a sell signal), then:

- If the field does **not** additionally include a 'L', then no order will be sent, i.e. it will require a subsequent valid signal candle to occur for that box, to generate an order.
- If the field does additionally include a 'L', then a **limit order** will immediately be placed with its entry **at the proximal edge** of the box. This order will remain until it is either manually deleted, or deleted according to the rules in the *DeletePendingOrders* parameter. A pending order counts as one order in terms of the *MaxOrdersPerBox*, *MaxOrdersPerSymbol* and *MaxOrdersPerCurrency* counts, even if it has not yet been triggered.

[Note: If an ampersand (&) is typed anywhere in the field, the value is assumed to be an ADR multiple, and is multiplied by a *ADRdays* daily range to convert it to a pip value.]

The parameter setting defaults to '999999' (999999 pips) so that it effectively does **not** impose any restriction.

EntryConfirmationPips

Normally, if all required conditions are met, a **market order** is sent on the open (first new tick) of the candle following the signal candle. This is true if *EntryConfirmationPips* is left at its default setting of '0'.

- However, if a **positive** (>0) value is typed into *EntryConfirmationPips*, then a BUYSTOP or SELLSTOP order will instead be placed with its entry at the designated number of pips away from the current market price. This can potentially avoid a 'false signal', since price must '**break out**' a further pips away from the box (in the direction

of the intended trade) to trigger an entry, but (if the stoploss is relative to the distal edge of the box) at the expense of the trade's R-value.

- if a **negative** (<0) value is typed into *EntryConfirmationPips*, then a BUYLIMIT or SELLLIMIT order will instead be placed with its entry at the designated number of pips away from the current market price. This can potentially create a better R-value trade (if the stoploss is relative to the distal edge of the box) by entering at a 'better' price, as price **pulls back**, but it means that price will be moving 'against' the direction of the intended trade at the time of entry.

[Note: If an ampersand (&) is typed anywhere in the field, the value is assumed to be an ADR multiple, and is multiplied by a *ADRdays* daily range to convert it to a pip value.]

If any pending order is created, it will remain in place until it is either manually deleted, or deleted according to the rules in the *DeletePendingOrders* parameter. A pending order counts as one order in terms of the *MaxOrdersPerBox*, *MaxOrdersPerSymbol* and *MaxOrdersPerCurrency* counts, even if it has not yet been triggered.

MaxSpreadPips

The maximum spread allowed, in pips. If the spread excees this value, the order will not be sent. *NumberOfAttempts* attempts, spaced *SecondsBetweenAttempts* seconds apart, will be made, to send any order. If all of this fails, due either to *MaxSpreadPips* being exceeded, or because the broker returns an error (which is recorded in the diagnostic file, if *PostDiagnosticInfo*>0), then no order will be sent, unless/until a subsequent signal candle occurs (and all necessary conditions are met).

SLmethod

This consists of three entries, separated by commas.
First entry: the stoploss method. The **first entry** may be any one of:
- '0' — no SL will be set.
- 'N' — the SL will be set at the price specified (an invalid entry will likely cause the MT4 error 130 'invalid stops').
- 'NP' — if N>0, the SL will be set N pips (P=pips) further away from the **distal** edge of the box. If N<0, the SL will be set N pips closer to the entry, from the **distal** edge of the box.
- 'NE' — the SL will be set N pips away from Entry (E=entry).
- 'NC' — the SL will be set N pips above the highest high of the last X candles (for a sell entry) or N pips below the lowest low of the last X candles (for a buy entry). X is the setting in the fourth entry
- '' — if the first entry is left blank, it defaults to '0P', i.e. the SL is set at the **distal** edge of the box.

Second entry: the **minimum** distance (in pips) that the SL, after the first entry has been used to calculate its initial position, must be away **from the entry price**. If less than this value, the the SL is moved until this requirement is met. Hence if the SL is based on the box edge, but the signal candle closes too close to the edge, this entry will be used to widen the SL.

<u>Third entry</u>: the **maximum** distance (in pips) that the SL, after the first entry has been used to calculate its initial position, must be away **from the entry price**. If greater than this value, the the SL is moved until this requirement is met.

<u>Fourth entry</u>: this is needed only if the first entry is 'NC', and may be omitted otherwise. If omitted, it defaults to a value of 10. Commas must be included as placeholders if the second/third entries are omitted. The value is the number of candles to look back (including the signal candle) to determine the swing high/low outside which the SL will be placed.

Notes:
1. If an ampersand (&) is typed anywhere in any of the first three entries, its value is assumed to be an ADR multiple, and is multiplied by a *ADRdays* daily range to convert it to a pip value.
2. If *AdjustForSpread* = TRUE, the SL for **sell** entries (which are closed at the ASK price) will be adjusted upward by the amount of the current spread.

TPmethod

The Take Profit setting may be any one of:
- '0' — no TP will be set.
- 'N' — the TP will be set at the price specified (an invalid entry will likely cause the MT4 error 130 'invalid stops').
- 'NP' — if N>0, the TP will be set N pips (P=pips) further away from the **proximal** edge of the box. A value of N<0 will likely result in an invalid TP.
- 'NE' — the TP will be set N pips away from Entry (E=entry).
- 'NR' — the TP will be set N R-multiples away from the entry, where 1 R-multiple is the distance between the entry and the SL.
- '' — if the first entry is left blank, it defaults to '0', i.e. no TP is set.

Notes:
1. If an ampersand (&) is typed anywhere in the field, the numeric value is assumed to be an ADR multiple, and is multiplied by a *ADRdays* daily range to convert it to a pip value.
2. If *AdjustForSpread* = TRUE, the SL for **sell** entries (which are closed at the ASK price) will be adjusted upward by the amount of the current spread.
3. If both a SL and TP (and/or any other exit method, e.g. trailing SL) are used, the order will be exited at whichever level gets triggered first.

AdjustForSpread
- If TRUE — the box edges plotted on the chart represent the BID prices (and hence align compatibly with other candle OHLC, S/R levels, lines etc). Where applicable, the current spread will be added to these prices where an entry/SL/TP operation requires execution at the ASK price.
- If FALSE — the box edges represent the actual prices that entries and exits will be executed: ASK prices for BUY operations, BID prices for SELL operations.

CloseOppositeOrders

- If TRUE — immediately before a (market or pending) order is sent, Ambrosia checks to see if any (open or pending) Ambrosia-created orders of the opposite polarity (buy ↔ sell) exist, and immediately attempts to close all such orders, leaving the EA singly long or short in the direction of the new order.
- If FALSE — any opposing orders are not closed. This means that the EA may be left 'same pair hedged', but with all of these orders operating independently of each other.

DeletePendingOrders

Pending (limit or stop) orders may be created by the *MaxPipsEntryFromBox* and *EntryConfirmationPips* settings. These orders remain in place until either deleted manually, or if an order of opposite polarity is created on the chart, and *CloseOppositeOrders* is TRUE.

DeletePendingOrders must be one of the following:
- '' — the default setting of blank/empty means that no pending orders will be deleted by this facility
- 'X' — (i.e. eXit): limit orders are deleted if/when price reaches the order's TP (for a limit order) or its SL (for a stop order)
- 'NE' or '&NE' — (where N = a number of pips, or a number of ADRs, from the pending order's Entry price): pending orders are deleted if/when price reaches N pips/ADRs above entry for a BUYLIMIT or SELLSTOP order, or N pips/ADRs below entry for a BUYSTOP or SELLLIMIT order
- 'NT' — (i.e. Time in hours): each pending order is deleted after it has been inactive for N hours (you can enter fractions of an hour, e.g. 2.25T = 2 hours 15 minutes)

Note: this process operates by checking on every new price tick (as opposed to the order creation process, which operates on the first tick of each new *BVCandleTimeframe* candle).

ProfitPipsForSLtoBE
BEpointPips

These settings optionally cause the SL of any Ambrosia-created trade on the current chart to be advanced to breakeven+*BEpointPips* pips, immediately the trade is *ProfitPipsForSLtoBE* pips in profit.

ProfitPipsForSLtoBE may be entered as 'N' or '&N'. (If an ampersand (&) is typed anywhere in the field, the value is assumed to be an ADR multiple, and is multiplied by a *ADRdays* daily range to convert it to a pip value.)

To disable this facility, set *ProfitPipsForSLtoBE* to a negative (<0) value, i.e. just leave the default setting.

Note: this process operates by checking on every new price tick (as opposed to the order creation process, which operates on the first tick of each new *BVCandleTimeframe* candle).

TrailingSL
TrailOnlyAfterBEreached

These settings optionally enable a trailing SL for all Ambrosia-created trades on the current

chart.

TrailingSL — this may be entered as 'N' or '&N'. (If an ampersand (&) is typed anywhere in the field, the value is assumed to be an ADR multiple, and is multiplied by a *ADRdays* daily range to convert it to a pip value.)

To disable this facility, set *TrailingSL* to a zero or negative (<=0) value, i.e. just leave the default setting.

TrailOnlyAfterBEreached —

- If TRUE — the SL will not start to advance until the trade reaches breakeven
- If FALSE — the trailing process will begin as soon as the trade is open

<u>Note</u>: the trailing facility operates completely independently of the *ProfitPipsForSLtoBE* / *BEpointPips* process (even if the latter is disabled). A trade can be closed for any number of reasons (e.g. SL or TP reached, trailing SL hit, an order of the opposite polarity is opened with *CloseOppositeOrders* TRUE, etc), whichever occurs first.

MaxOrdersPerBox

This allows you to restrict the number of orders that the EA will place per Ambrosia-designated box. Ambrosia counts the number of pending, open **and closed** orders that have already resulted from the box, **regardless of their polarity** (buy or sell), by looking for the object description in the order comment. If the counted number equals that specified in *MaxOrdersPerBox*, then no further orders will be placed, arising from any signal candles inside the box. However, each box is counted separately, and signal candles in any overlapping boxes can generate additional orders.

The default setting is 1; you will need to increase this if you want additional orders to be placed if price re-tests the S/R levels enclosed by the box. Changing the box's description, or deleting and replacing the box, also effectively resets the count, as Ambrosia considers it to be a new/different box.

Pending orders are included in the count because they can potentially be triggered. Closed orders are included because they indicate that the S/R level has already been tested. Because the polarity is not considered, then if *AllowableOrders* allows both buy and sell orders, *MaxOrdersPerBox* would need to be set to a value greater than 1 if you want turncoat support to potentially create an order after resistance has already generated an order 'on the other side'.

MaxOrdersPerSymbol
MaxOrdersPerCurrency

This allows you to restrict the **net position** (number of Ambrosia-generated open orders, as opposed to number of lots) long or short that may be open simultaneously. Both *MaxOrdersPerSymbol* and *MaxOrdersPerCurrency* operate separately from each other. The net position is summed (number of buy orders, minus number of sell orders) for the symbol, or currency, across **all charts**, and if the current signal was to generate an order that would exceed this limit, either long or short, Ambrosia will not attempt to create this order.

The count includes both pending and open orders, as pending orders are potentially

actionable. If a pending order causes a count to be exceeded, and a signal to be ignored, then if that pending order is later deleted (e.g. by the *DeletePendingOrders* facility), a subsequent signal would need to occur, i.e. it is obviously too late for the previously ignored signal to be reconsidered.

The default values for each of these settings is 999999, i.e. effectively no limit to the number of orders per symbol or currency.

As an example of how polarity is considered, if there is already one Ambrosia-generated SELL order open for GBPJPY, then the count for GBP would be –1 and the count for JPY would be +1. Hence, if *MaxOrdersPerCurrency* was set to 1, then a new signal to BUY EURGBP (i.e. EUR +1; GBP –1) would effectively cause the count for GBP to reach -2, i.e. two sell orders for GBP, causing the signal to be ignored.

MagicNumberBuy
MagicNumberSell
These are the magic numbers that will be assigned to Ambrosia-created BUY and SELL orders, respectively. They can then be referred to by other EAs, e.g. for trade management or subsequent P/L analysis.

If a zero value is entered, no magic number is assigned.

If a negative (<0) value is entered, Ambrosia attempts to assign a unique magic number to the order, by combining the the box number with a number unique to each symbol.

NumberOfAttempts
SecondsBetweenAttempts
These values are effective for all trade related operations, i.e. creating new market or pending orders, closing open orders, moving a SL, deleting pending orders.

Upon having an error message returned by the broker, Ambrosia will attempt to re-perform the operation, after a wait of *SecondsBetweenAttempts* seconds, repeatedly until either the operation is successful, or the total *NumberOfAttempts* has been made. If the operation fails at that point, the error will be logged in the diagnostic file (if *PostDiagnosticInfo* is >= 1), and the operation will not be re-attempted until either the next price tick (in the case of a trade management function), or the next valid signal candle (in the case of placing a new order), occurs.

ArrowColorBuy
ArrowColorSell
These values determine the colors of the little arrows that are placed on the chart, at the entries and exits of BUY and SELL trades, respectively. Choose 'None' from MT4's dropdown menu if you don't want these arrows on your chart.

SnapshotFile

This option causes a screenshot to be taken at the time each new (open or pending) order is accepted by the broker. A .gif file with a unique name (including symbol ID, chart timeframe, current MT4 date/time) is created in or under the **.../MQL4/Files** folder.

Type backslashes to create/use subfolders under the **.../MQL4/Files** folder. The default value of 'Ambrosia screenshots\#amb—' causes the file to be created in a subfolder named 'Ambrosia screenshots', and with the file name prefixed by '#amb—'.

To disable the snapshot facility, leave the *SnapshotFile* setting empty.

ADRdays

This sets the number of days used in the ADR (average daily range) calculations, both where an ampersand (&) is used to define an entry/SL/TP setting, and also where the *RiskPerTrade* option is '&'. Daily range is calculated over the last *ADRdays* market days, i.e. Saturdays and Sundays are omitted.

RHEboxTMoptions

Provided that *UseBoxTimeConstraints* is set to TRUE, Ambrosia will not attempt any new (open or pending) orders while the current price candle resides outside the left or right edges of a given Ambrosia-designated box. Hence you can create boxes that avoid orders being placed at certain times of the day, e.g. slow sessions, around high impact news events.

RHEboxTMoptions allows you to take this one step further, i.e. to define any Trade Management operations that you wish to occur when price reaches the RightHandEdge of a box. Hence you may, for example, close any open orders, or delete pending orders, just prior to high impact news. Currently, valid entries are:

- '' — leaving blank/empty (the default value) means that no Trade Management operations will be attempted.

- 'C' — typing a 'C' anywhere in the field means that any Ambrosia-created open orders will be closed. BUY orders are closed at the BID price, SELL ortders at the ASK price.

- 'D' — typing a 'D' anywhere in the field means that any Ambrosia-created pending orders will be deleted.

These options are attempted once (actually, *NumberOfAttempts* times) on the first new tick of the candle that touches the RHE of the box.

(Currently, these are the only TM options available. Later, I might add some other options, e.g. advance the SL.)

MaxDrawdownAllowed

This allows you to cap drawdown, i.e. cause Ambrosia to stop creating new orders after a

certain amount of loss has occurred over a specified time period by Ambrosia-generated orders. It consists of two entries, separated by a comma.

The **first entry** is the number of hours over which Ambrosia will look backward from the current time, totalling the P/L of any open or closed orders that were opened during this period. Enter 0 to disable this facility. Enter something like 999999 to have Ambrosia total the P/L over all orders that were created since its inception, i.e. calculate the system's total drawdown.

The **second entry** is the maximum allowed drawdown. Although drawdown is effectively negative, enter a positive number, either with a percent (%) symbol, if you are expressing it as a percentage of account **equity**, or simply a number, if you're expressing it as a dollar value (or whatever currency your account is denominated in).

For example, suppose you enter '24,300'. Then if the P/L of all of your Ambrosia-created orders that were opened over the last 24 hours shows a loss of > $300, any signal candles will be ignored until such time as the loss is no longer > $300. This could occur if, for example, losses on open orders decrease, or the 24 hour window has meanwhile shifted so that some (open or closed) trades that were in loss are no longer included in the audit.

PostDiagnosticInfo
Diagnostic information can be sent to a file named
[EAname]debug_[symbolID],[chart timeframe].txt
in the **.../MQL4/Files** folder. Valid entries are:

- '0' — no diagnostic info will be sent. The file will not be created.
- '1' — diagnostic info will be sent only upon an error being returned by the broker, to an order processing related operation.
- '2' — diagnostic info will be sent whenever any order processing operation occurs, whether the outcome successful (accepted by the broker) or not (an error is returned).
- '3' — diagnostic info is sent at strategic points in the program logic. This is the default and recommended option, as it is almost impossible to troubleshoot the EA without this information.

RemoveObsoleteBoxes
This facility allows the EA to automatically delete Ambrosia-related boxes whose RHE is more than *RemoveObsoleteBoxes* hours old.

- To enable this facility, enter the number of hours as a positive (>0) value. On the first tick of a new candle, all Ambrosia-related boxes whose RHE is more than this number of hours old will immediately be removed from the chart..

- To disable this facility, enter a negative (<0) value. The default is –1. Boxes will remain on the chart until you delete them manually.

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