

Description of SML_EA_v1 For MT4/MT5 - EA

English is not my native language so surely this description will contain many potential errors. Please ask me again if there is any content that needs clarification to avoid misunderstanding this description.

Warning Noted:

- This description serves as an agreement between me and the developers to create a new EA for the versions running on MT4 and MT5 platforms.
- This is EA multi-function, multi-task, multi-symbols and multi-time frame. The EA must be able to use for any global financial market, stable and low energy.
- The source files (mq4) of the MT4 indicators are attached here but the source files (mq5) are not available at the present time, the Coder needs to convert from mq4 source codes.
- This is the package budget to complete the EA according to this description of 1,500 USD. This fee includes maintenance, fixing bugs and conversion of source code from MT4 to MT5 and no time limit/ Unlimited provision. This budget also includes modifying (or changing) the source code of the indicators in case they fail, especially making them compatible with the MT4 / MT5 global version. This budget has also planned the Coder reward for the review and give me best strategic advice to enhance EA performance and the fastest completion time.
- Indicators must be able to operate separately or mixed together, if set like that. I will base on the independent performance of each indicator as an EA for acceptance and payment.
- First, the Coder needs to review the descriptive record in the attached Doc file and ask questions to complete this description before implementation.
- In the process of Question - Answer. I will not have the guarantee to deliver my project to Coder because I am looking for a Developer who can complete the project as quickly as possible and can create the smartest EA for me.
- Very pleased to cooperate with talented and professional developers.
- Finally, I need the Developer's criticism through the questionnaire - answer before the two sides reach the contract.

Best Regards,
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I. General information for new version.

a) Overview

This is a Universal Expert Advisory with Multifunctional, Multi-symbols and Multi-timeframe.

i. Multi-symbols/Multi-currency:

- Forex: EA can trade at least 28 different currency pairs as follows: EURUSD,GBPUSD,USDCHF,EURJPY,GBPJPY,USDJPY,EURGBP,AUDUSD,NZDUSD,USDCAD,EURAUD,GBPAUD,EURNZD,GBPNZD,GBPCAD,GBPCHF,EURCAD,AUDCAD,AUDCHF,AUDNZD,AUDJPY,NZDCHF,NZDCAD,NZDJPY,CADCHF,CADJPY,CHFJPY,EURCHF.
- And another any financial market.

ii. Multifunction:

EA can trade with all modes trading such as: Initial_trades; Pyramid_trades; Grid_trades; Pyramid-Reverse_trades and Recovery_trades;

iii. Multi-timeframe:

EA can operate on any time frame from M1 to MN.

b) **Indicators:** The EA is built-in all 12 indicators and divided into 3 groups as follows:

i. Group of Entry Indicators:

1. SML_ATR_Channels indicator;
2. SML_WCCI-L5 indicator;
3. SML_SR-Filters;
4. SML_4BARS-MTF;
5. SML_PLD-Entry.

Note for Entry Indicators:

- Entry signals emitted by the above indicators can be separate and independent of each other, if enabled.
- If disabled then automatically these indicators will be used to confirm or exit, if set like that.
- Enabled indicators can use these indicators' signals for Entry, Confirm and Exit, if set like that.

ii. Group of Confirmation Indicators:

The signal issued by the below indicators to confirm must be consensus together, if enabled.

1. SML_ATR_Channels indicator;
2. SML_SR-Filters indicator;
3. SML_WCCI-L5 indicator;

a) WCCI-L5_indicator has 3 entry signals: EntryCCI, TrendyCCI and Zero-line. Customize for these parameters by input-menu located at Initial Setting Input-menu.

- The signal of **EntryCCI** use CCI line and based on the **EntryCCI_Period** parameter;
- **TrendyCCI** signal use Bar and based on related parameters such as **TrendyCCI_Period** and **Trend_Period**. **Trend_Period** parameter to set the next Bar number (Yellow bar) after **TrendCCI** signal changes direction (based on Zero-line) to open the trades.

Noted for TrendCCI.

If the **TrendyCCI** parameter is selected, it means that the EA allowed to open the trade whenever these Bars (Yellow bars) appear.

- The signal of Zero line is based on **LSMAPeriod** or **EMAPeriod** (by optional).

a. WCCI-L5_indicator also a zone needs customization, for example from (-50 to +50) and located at the input-menu setting of this indicator.

4. SML_TMASTS-Alert indicator;
5. SML_4BARS-MTF indicator;
6. SML_PLD-Entry indicator;
7. **SML_TrendAlt indicators:** This indicator has a total of 3 with 3 different count settings as below:
 - SML_TrendAlt_1: count 9;
 - SML_TrendAlt_2: count 14;
 - SML_TrendAlt_3: count 20.

iii. **Group of Exiting Indicators:**

1. SML_ATR-Stop indicator;
2. SML_PLD-Exit indicator;
3. SML_ATR_Channels indicator;
4. SML_SR-Filters indicator;
5. SML_HeikenAshi_Exit indicator.

(Exit signals emitted from the above indicators can be separated and used independently of each other, if enabled).

(All indicators attached mq4 files);

- In the case of technical reasons, the coder can use the indicator multiple times for different functions; for example, SML_ATR-Stop indicator for exit strategies of different Trades Modes;
- The parameter of each indicator should be moved and built-in in EA;
- Indicators need to be customized for each individual indicator to (Enable / Disable) these indicators;
- Indicators need to be customized for each individual indicator to **(True, 1/ False, 0)** the signal bar of these indicators;
- These indicators have been coded for more than 10 years, so the Coders should upgrade the source codes in accordance with the current version of MT4 / MT5 and globally;
- In case of any error / warning notice of indicators, Coders is also responsible for repairing;
- Some indicators may not have (mq5) source code, so Coders is also responsible for converting to MT5 source code from mq4 source code;
- All indicators can operate independently when it enabled and other indicators are disabled.

II. Entry Strategies: *(Can be customized so that Trader can use the Input-Menu Setting of this item to select the Entry strategy as desired).*

- The Entry can be opened either by using the EAs Entry Methods (Trader is the current Entry Strategies available) or using your own trades (Manual/Expert advisor).
- External Trade: If I use to use the EA with my own trades then
 - Put the EA on the chart you wish to open a trade and set Entry Strategy to External-Trades;
 - Open a trade to the symbol that I want to trade;
 - Set Magic1 to 0 for manual trades;
 - Open only one trade on that symbol;

III. Initial Trades:

1. Conservative Strategy:

EA opened the initial trade when Price was moving around the middle line (Lime color) of the F1 Zone and the previously closed bar was crossing the Lime-Midline of SML_ATR_Channels indicator.

And /or the previously closed Bar touched Lime-Midline's Buffer Zone of SML_ATR_Channels indicator.

(Buffer zone of Lime-midline according to the number of customizable in pips. The Coder needs to add an input-menu for this parameter. For example, if Buffer Zone set is 5 pips, that means the distance is +5 pips from Lime-Midline goes up and the distance is (-5 pips) from Lime-Midline) goes down).

2. Aggressive Strategy:

EA opens the initial trade when the price is moving around the boundary of F1 Zone and the previously closed Bar is crossing the upper line (Aqua color) or the bottom line (Yellow color) of the SML_ATR_Channels indicator.

Both strategies if above, the EA opens all trading Modes based on EA's integrated indicators, including all trades as like Initial_trades, Pyramid_trades and Pyramid_Reverse_trades.

3. General Initial Trades Rules:

- The initial trade stage is the way trades get opened when no trades are active. Initial trades can be opened either by using the EAs Entry Methods (Trader is the current entry strategy available) or using your own trades (Manual/Expert advisor).
- Initial Trades can only open trading in the F1 Zone (Aqua – Yellow line) and, when the Price of previously closed Bar is inside the F1 zone;
- Initial trades can use indicators such as filters to open trades and Initial Trades always opened in the same direction as all indicators, if enabled;
- The Initial Trades are opened at Bar Zero or one (0/1), if set like that;
- When the Initial Trades is closed with profit and if the Price remaining in the F1 Zone of SML_ATR_Channels indicator; EA can open other Initial trades according to this rule;
- Take Profit, Trailing Stop, Stop Loss functions apply for closing the initial trades. In the case of loss Initial trades, then it will get managed by the grid and recovery modes available

4. The Indicators and open trading rules of Initial Trades: The Initial trades are opened based on the chosen of Entry Strategy and when one or all the indicators below (if set like that) agree on the following rules:

1. **For SML_ATR Channels indicator:** This is the main indicator that issued the signal Buy / Sell for EA with two entry strategies:

i. **Conservative Strategy:** The price of the previously closed Bar touched the Lime-Midline of the SML_ATR_Channels indicator;

- **For Buy trades:** When the Price of previously closed Bar touched and higher than the Lime-Midline's price, the EA opens the **Buy** position at the next bar, if set like that.
- **For Sell trades:** When the Price of previously closed Bar touched and lower than the Lime-Midline's price, the EA opens the **Sell** position at the next bar, if set like that.

AND/OR; whichever comes first;

- The Price of the previously closed bar touched the Buffer Zone of Lime-Midline of SML_ATR Channels Indicator;
- **For Buy trades:** When the Price of previously closed Bar touched and above the Lime-Midline, the EA opens the **Buy** position at the next bar, if set like that;
- **For Sell trades:** When the Price of previously closed Bar touched and below Lime-Midline, EA opens the **Sell** position at the next bar, if set like that.

Note for Conservative Strategy of SML_ATR_Channels indicator:

- **Buy trades** positions are always higher than Lime-Midline.
- **Sell trades** positions are always lower than Lime-Midline.

ii. **Aggressive Strategy:** The price of the previously closed Bar touched upper F1 line (Aqua color) or bottom F1 line (Yellow color) of the SML_ATR_Channels indicator;

- **For Buy trades:** When the previously closed Bar touched Bottom F1 line (Yellow line color) and, its Price is **higher**, the EA opens the **Buy** position at the next bar, if set like that.
- **For Sell trades:** When the previously closed Bar touched upper F1 line (Aqua line color) and, its Price is **lower**, the EA opens the **Sell** position at the next bar, if set like that.

Note for Aggressive Strategy of SML_ATR_Channels indicator:

- **Buy trades** positions are always **higher** than Bottom F1 Line (Yellow).
- **Sell trades** positions are always **lower** than Upper F1 Line (Aqua).

Note for SML_ATR Channels indicator: The EA needs to use smart algorithms to know exactly when the Price has touched ATR or buffer zones; when the Price touches ATR lines but Price needs to be higher or lower; whichever comes first; and with the consent of other indicators (if enabled) as well as following the rules outlined in this description.

2. **For SML_ArrZZX2 indicator:** The dots and arrow appear and the Price of previously closed Bar in the same direction as SML_ArrZZX2 indicator (if enabled);
 - i. **For Entry signal**
 - **For Buy signal:** When the **Blue** arrow appears and the current Bar is closed, EA opens the **Buy** trades at the next Bar, if set like that;
 - **For Sell signal:** When the **Magenta** arrow appears and the current bar is closed, EA opens the **Sell** trades at the next Bar, if set like that;
 - ii. **For confirm the signal**
 - **For confirm Buy signal:** when the Price of previously closed Bar confirmed by **Blue dot** of SML_ArrZZX2 indicator;
 - **For confirm Sell signal:** when the Price of previously closed Bar confirmed by **Red dot** of SML_ArrZZX2 indicator.
3. **For SML_PLD-Entry indicator:** The Price of previously closed Bar only needs to be in the same direction as SML_PLD-Entry indicator is valid (if enabled);
 - i. **For Entry signal**
 - **For Buy signal:** Entry **Blue Buy arrow** signal confirmed by all Bars of indicator are **Blue**, then **Buy** trade open right at the current Bar (0), if set like that;
 - **For Sell signal:** Entry **Red Sell arrow signal** confirmed by all Bars of indicator are **Red**, then **Sell** trade open right at the current Bar (0), if set like that.
 - ii. **For confirm the signal**
 - **For Confirm Buy Signal:** when the Price of previously closed Bar confirmed by all **Blue Squares** Bars of SML_PLD-Entry indicator;
 - **For Confirm Sell Signal:** when the Price of previously closed Bar confirmed by all **Red Squares** Bars of SML_PLD-Entry indicator.
4. **For SML_4BARS-MTF indicator:** The Price of previously closed Bar only needs to be in the same direction as SML_4BARS-MTF indicator is valid (if enabled);
 - i. **For Entry signal:**
 - **For Buy signal:** When the **Lime-Green arrow** appears and the current Bar is closed, EA opens the **Buy** trades at the next bar, if set like that;

- **For Sell signal:** When the **Red arrow** appears and the current Bar is closed, EA opens the **Sell** trades at the next bar, if set like that;
- ii. **For confirm the signal:**
- **For Confirm Buy Signal:** When the Price of previously closed Bar confirmed by 3 of 4 **Green Squares** of SML_4BARS-MTF indicator;
 - **For Confirm Sell Signal:** When the Price of previously closed Bar confirmed by 3 of 4 **Red Squares** of SML_4BARS-MTF indicator.
5. **For SML_TMATS-Alert indicator:** The Price of previously closed Bar only needs to be in the same direction as SML_TMATS-Alert indicator (if enabled);
- i. **For Entry signal:**
- **For Buy signal:** When the **Lime arrow** appears and the current Bar is closed, EA opens the **Buy** trades at the next Bar, if set like that;
 - **For Sell signal:** When the **Red arrow** appears and the current bar is closed, EA opens the **Sell** trades at the next Bar, if set like that.
- ii. **For confirm the signal:**
- **For confirm Buy signal:** when all colors of upper Bars in a position higher than Zero-line of SML_TMATS-Alert indicator; and the Price of previously closed Bar goes Up is **confirmed Buy signal**;
 - **For confirm Sell signal:** when all colors of bottom Bars in a position lower than Zero-line of SML_TMATS-Alert indicator; and the Price of previously closed Bar goes Down is **confirmed Sell signal**.
6. **For SML_WCCI-L5 indicator** (How does the indicator work? has been described above, page 2).
- a. The Price of the previously closed Bar, based on the **EntryCCI** line (Crimson color) /or **TrendyCCI** bar (option) touched the Zero-line and is in range from (-50 to +50), if set like that, is valid.
- **For Buy signal:** If the Price has touched and is higher than the Zero line and is in the range from (0 to +50), if set like that; and the EA allowed opens the **Buy** position at the next Bar, if enabled;
 - **For Sell signal:** If the price has touched and is lower than the Zero line and is in the range from (0 to -50), if set like that; and the EA allowed opens the **Sell** position at the next Bar, if enabled.

AND/OR; whichever comes first.

- b. The price of the previously closed Bar, based on the **EntryCCI** line (Crimson color) /or **TrendyCCI** bar (option) don't touch the Zero-line, but has touched and is in the range from (-50 to +50), if set like that, is valid;
 - **For Buy signal:** If the price has not touched the Zero-line, but is in the range from (0 to +50), if set like that; and the EA allowed opens the **Buy** position at the next bar, if enabled;
 - **For Sell signal:** If the price has not touched the Zero line but is in the range from (0 to -50), if set like that; and the EA allowed opens the **Sell** position at the next bar, if enabled.
 - c. **Note for EntryCCI/ TrendyCCI; and the Range from (-50 to +50):**
 - The parameters both of **EntryCCI** and **TrendyCCI** and the zone from (-50 to +50) needs the coder to customize and these input-menus located in SML_WCCIL5 indicator setting.
 - If the **TrendyCCI** parameter is selected, it means that the EA allowed to open the trade whenever these Bars (**Yellow bars**) of **TrendyCCI** appear, if set like that.
7. **SML_TrendAlt_1 indicator:** The Price of previously closed Bar only needs to be in the same direction as SML_TrendAlt_1 indicator is valid (if enabled);
- **For Buy signal:** when **Dodger-Blue** color line in a position higher than Zero-line while Zero-line **Red** color; and the Price of previously closed Bar is higher than Zero-line, is **Buy** trades;
 - **For Sell signal:** when **Red** color line in a position lower than Zero-line while Zero-line **Dodger-Blue** color; and the Price of previously closed Bar is lower than Zero-line, is **Sell** trades;
8. **For SML_PLD-Exit indicator:** The Price of previously closed Bar only needs to be in the opposite direction as SML_PLD-Exit indicator; Exit signal when exit arrow of SML_PLD-Exit indicator appears (if enabled).
- **For confirm the exit for all Buy trades:** can be used to exit for all Buy trades that confirmed by **Red arrow** of indicators;
 - **For confirm the exit for all Sell trades:** can be used to exit for all Buy trades that confirmed by **Dodger-Blue arrow** of indicator.
9. **For SML_ATR-Stop indicator:** The Price of previously closed Bar only needs to be in the same direction as SML_ATR-Stop indicator (if enabled); Exit signal when dot of SML_ATR-Stop indicator changes colors.
- **For Buy trades:** can be used to exit all **Buy** trades when Price touches the lower ATR Stop **Lime-Green** line.

- **For Sell trades:** can be used to exit all **Sell** trades when Price touches the lower ATR Stop **Orange-Red** line.

10. SML_HeikenAshi_Exit indicator: The Price of previously closed Bar only needs to be in the same direction as SML_HeikenAshi_Exit indicator (if enabled); Exit signal when the Bar of SML_HeikenAshi_Exit indicator changes colors.

i. For confirm the Buy/Sell signal:

- **For confirm Buy signal:** when the Price of previously closed Bar confirmed by Lime bars of SML_HeikenAshi_Exit indicator;
- **For confirm Sell signal:** when the Price of previously closed Bar confirmed by all **Red** bars of SML_HeikenAshi_Exit indicator.

ii. For confirm the Exit trades:

- **For confirm the exit for all Buy trades:** when the Price of previously closed Bar confirmed by **Red** Bars of SML_HeikenAshi_Exit indicator;
- **For confirm the exit for all Sell trades:** when the Price of previously closed Bar confirmed by **Lime** Bars of SML_HeikenAshi_Exit indicator.

11. Initial trades Exit Strategies:

- According to TP / SL setting of initial trades; **And/ Or;**
- Exit at the opposite direction when SML_SR-Filters indicator arrow appears; **And/ Or;**
- When the Price closes back inside and touch on the top (**Aqua line color**) or bottom (**Yellow line color**) of F1 line of SML_ATR_Channels indicator; **and/ or** when the Price touch on the top (**Blue line color**) or bottom (**Red color**) of F3 lines of SML_ATR_Channels indicator.
Whichever of the above 2 cases comes first; And/ Or;
- Exit Buy trades whenever price breaks below ART Stops level (**Lime-Green line**) and shows bearish trend signals; and Exit Sell trades whenever price breaks above ART Stops level (**Orange-Red line**) and shows bullish trend signals instead; **And/Or;**
- Exit with the SML_PLD-Exit indicator according to its rules.
 - **For confirm the exit for all Buy trades:** can be used to exit for all Buy trades that confirmed by **Red arrow** of indicators;
 - **For confirm the exit for all Sell trades:** can be used to exit for all Buy trades that confirmed by **Dodger-Blue arrow** of indicator

- vi. Exit with the SML_HeikenAshi-Exit indicator according to its rules.
 - **For confirm the exit for all Buy trades:** when the Price of previously closed Bar confirmed by **Red** Bars of SML_HeikenAshi_Exit indicator;
 - **For confirm the exit for all Sell trades:** when the Price of previously closed Bar confirmed by **Lime** Bars of SML_HeikenAshi_Exit indicator

The exit of initial trades needs the coders to make their own customizations using input-menu to select one or more of the 6 strategies outlined above. If there is more than one, then EA will use whichever of the chosen cases comes first. The Input-menu of exit of Initial Trades are located at Initial_Trades_Setting.

12. Conclusion:

- When all the above rules are met allow the EA to open Initial trades at the next bar, if set like that; And close the trades according to exit rules stated separately for Initial trades.
- When the initial-trades is closed with profits; and the Price remains in the F1 Range of SML_ATR_Channels indicator; EA can open other initial-trades according to this rule;
- In the case loss of initial trades, the EA will activate Recovery_Modes to recover;

13. Example:

- a) **BUY of Initial_trades.** EA opens the trades according to the Rules outlined above and is summarized as follows:
 - If conservative strategy is chosen. When the Price moves and touched the **Lime-midline** of the SML_ATR_Channels indicator; AND/OR touched **Lime-midline** of Buffer Zone (from 0 to +50 lines) of SML_WCCIR indicator, if set like that;
 - If aggressive strategy is chosen. When the previously closed Bar touched bottom F1 line (**Aqua color**) and, its price is higher, the EA opens the Buy position at the next bar, if set like that.
 - Price is within the F1 Zone of SML_ATR_Channels indicator;
 - And the Price must be consented by all remaining indicators, if set like that;
- **BUY** initial trades can open in the Bar Zero (0) or next bar (1) (If set like that);
- b) **SELL of Initial_trades.** EA opens the trades according to the Rules outlined above and is summarized as follows:

- **If conservative strategy is chosen.** When the Price moves and touched the *Lime-midline* of the SML_ATR_Channels indicator; AND/OR touched *Lime-midline* of Buffer Zone (from 0 to -50 lines) of SML_WCCIR indicator, if set like that;
 - **If aggressive strategy is chosen.** When the previously closed Bar touched upper F1 line (*Yellow color*) and, its price is lower, the EA opens the Sell position at the next bar, if set like that.
 - Price is within the F1 Zone of SML_ATR_Channels indicator;
 - And the Price must be consented by all remaining indicators, if set like that;
 - **SELL** initial trades can open in the Bar Zero (0) or next bar (1) (If set like that);
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IV. Pyramid Mode.

1) General Rules to open Pyramid Trades in case of using indicator:

- Pyramid opens the trade if the market moves in a favorable direction which is usually the same direction as the initial trade.
- Pyramid only opens the trades when Price has touched the Step of Pyramid;
- Pyramid trades only opened in the condition that initial trades are closed;
- Pyramid can only open trades in the F2 Zone (Orange – DodgerBlue lines) and, when the Price of previously closed Bar has crossed over and is higher than F1 line (Aqua – Yellow);
- Pyramid trades can use indicators such as filters to open trades and, Pyramid trades is always opened in the same direction as all indicators, if enabled;
- After the 3 trades, (if set like that) has been opened the EA will be shifting the stop loss of all the trades to the previously opened trade. In this way, trader will be guaranteed a break even stop under 3 trades with that stop loss point and can expect profit increases as more Pyramid trades get opened;
- The Pyramid trades are opened at Bar Zero or one (0/1), if set like that;
- When the Pyramid trades is closed with profit and if the Price remains in the F2 Zone (Orange – DodgerBlue lines) of SML_ATR_Channels indicator; EA can open other Pyramid trades according to this rule;
- Pyramid trades uses separate Take Profit and Stop Loss;
- In the case of loss Pyramid trades, the EA will activate Recovery Mode to recover them.
- **Note for Pyramid_Gap:** *How many pips away (profitable) the next Pyramid Trade to be placed: 0*
(If set by Zero, it means that the Gap of Pyramid Trades is free, the EA can open trades everywhere but based on the signals of the indicators as long as the open position has a profit greater than 0);

2) The Indicators and open trading rules of Pyramid Mode.

1. For SML_ATR Channels indicator:

The Price has crossed over and is higher than F1 line (Aqua – Yellow) but within F2 Zone of SML_ATR Channels indicator. Pyramid trades only open in the range of F2 Zone (Orange – Dodger-Blue) and the Price has touched the Step of Pyramid;

- **For Pyramid Buy trades:** The Price has crossed over and the previously closed Bar is higher than F1 Aqua line; and the Price has touched the Step of Pyramid, EA opens the **Buy** trades at the next Bar, if set like that;
- **For Pyramid Sell trades:** The Price has crossed over and the previously closed Bar is lower than F1 Yellow line; and the Price has touched the Step of Pyramid, EA opens the **Sell** trades at the next Bar, if set like that.

2. **For SML_ArrZZX2 indicator:** The dots and arrow appear and the Price of previously closed Bar in the same direction as SML_ArrZZX2 indicator (if enabled);
 - a. **For Pyramid Trades Open Signal (if enabled):**
 - **For Pyramid Buy trades:** When the **Blue** arrow appears in the F2 Zone and the current Bar is closed; and the Price has touched the Step of Pyramid, EA opens the **Buy** trades at the next Bar, if set like that;
 - **For Pyramid Sell trades:** When the **Magenta** arrow appears in the F2 Zone and the current bar is closed; and and the Price has touched the Step of Pyramid, EA opens the **Sell** trades at the next Bar, if set like that.
 - b. **For Pyramid Trade Confirm Signal:**
 - **For confirm Pyramid Buy trades:** when the Price of previously closed Bar confirmed by **Blue dot** of SML_ArrZZX2 indicator;
 - **For confirm Pyramid Sell trades:** when the Price of previously closed Bar confirmed by **Red dot** of SML_ArrZZX2 indicator.
3. **For SML_PLD-Entry indicator:** The Price of previously closed Bar only needs to be in the same direction as SML_PLD-Entry indicator is valid (if enabled).
 - **For confirm Pyramid Buy trades:** when the Price of previously closed Bar confirmed by all **Blue Squares** bars of SML_PLD-Entry indicator;
 - **For confirm Pyramid Sell trades:** when the Price of previously closed Bar confirmed by all **Red Squares** bars of SML_PLD-Entry indicator.
4. **For SML_4BARS-MTF indicator:** The Price of previously closed Bar only needs to be in the same direction as SML_4BARS-MTF indicator is valid (if enabled);
 - **For confirm Pyramid Buy trades:** when the Price of previously closed Bar confirmed by 3 of 4 **Green Squares** of SML_4BARS-MTF indicator;
 - **For confirm Pyramid Sell trades:** when the Price of previously closed Bar confirmed by 3 of 4 **Red Squares** of SML_4BARS-MTF indicator.
5. **For SML_TMATS-Alert indicator:** The Price of previously closed Bar only needs to be in the same direction as SML_TMATS-Alert indicator (if enabled);
 - **For confirm Pyramid Buy trades:** when all colors of upper Bars in a position higher than Zero-line of SML_TMATS-Alert indicator; and the Price of previously closed Bar goes Up is **confirmed Buy signal**;
 - **For confirm Pyramid Sell trades:** when all colors of bottom Bars in a position lower than Zero-line of SML_TMATS-Alert indicator; and the Price of previously closed Bar goes down is **confirmed Sell signal**.

6. **For SML_WCCI-L5 indicator:**

- a) The Price of the previously closed Bar, based on the **EntryCCI** line (Crimson color) /or **TrendyCCI** bar (option) has touched the Zero-line and is in range from (-50 to +50), if set like that, is valid.
- **For Pyramid Buy signal:** If the Price has touched and is higher than the Zero line and is in the range from (0 to +50), if set like that; and the Price has touched the Step of Pyramid, EA allowed opens the **Buy** position at the next Bar, if enabled;
 - **For Pyramid Sell signal:** If the price has touched and is lower than the Zero line and is in the range from (0 to -50), if set like that; and the Price has touched the Step of Pyramid, EA allowed opens the **Sell** position at the next Bar, if enabled.

AND/OR; whichever comes first.

- b) The price of the previously closed Bar, based on the **EntryCCI** line (Crimson color) /or **TrendyCCI** bar (option) don't touch the Zero-line, but has touched and is in the range from (-50 to +50), if set like that, is valid;
- **For Pyramid Buy signal:** If the price has not touched the Zero-line, but is in the range from (0 to +50), if set like that; and the Price has touched the Step of Pyramid, EA allowed opens the **Buy** position at the next bar, if enabled;
 - **For Pyramid Sell signal:** If the price has not touched the Zero line but is in the range from (0 to -50), if set like that; and the Price has touched the Step of Pyramid, EA allowed opens the **Sell** position at the next bar, if enabled.
- c) **Note for EntryCCI/ TrendyCCI; and the Range from (-50 to +50):**
- The parameters both of **EntryCCI** and **TrendyCCI** and the Range from (-50 to +50) needs the coder to be customized and the input-menu located in SML_WCCI-L5 indicator setting.
 - If the **TrendyCCI** parameter is selected, it means that the EA allowed to open the trade whenever these Bars (**Yellow bars**) of **TrendyCCI** appear.
- d) **For Confirm Pyramid Trades**
- **For confirm Pyramid Buy trades:** when the Price of previously closed Bar confirmed by **Blue Bars** and above Zero line of SML_WCCI-L5 indicator;
 - **For confirm Pyramid Sell trades:** when the Price of previously closed Bar confirmed by **Red Bars** and below the Zero line of SML_WCCI-L5 indicator.

7. **SML_TrendAlt_2 indicator:** The Price of previously closed Bar only needs to be in the same direction as SML_TrendAlt_1 indicator is valid (if enabled);
 - **For confirm Pyramid Buy trades:** when **Dodger-Blue** color line in a position higher than Zero-line while Zero-line **Red** color; and the Price of previously closed Bar is higher than Zero-line;
 - **For confirm Pyramid Sell trades:** when **Red** color line in a position lower than Zero-line while Zero-line **Dodger-Blue** color; and the Price of previously closed Bar is lower than Zero-line.

8. **For SML_PLD-Exit indicator:** The Price of previously closed Bar only needs to be in the opposite direction as SML_PLD-Exit indicator. The exit signal when exit arrow of SML_PLD-Exit indicator appears, if enabled.
 - **For Confirm Pyramid Buy trades:** can be used to exit for all **Buy** trades that confirmed by **Red arrow** of indicators;
 - **For Confirm Pyramid Sell trades:** can be used to exit for all **Sell** trades that confirmed by **Dodger-Blue arrow** of indicator.

9. **For SML_ATR-Stop indicator:** The Price of previously closed Bar only needs to be in the same direction as SML_ATR-Stop indicator (if enabled). The exit signal when dot of SML_ATR-Stop indicator changes colors.
 - **For Confirm Pyramid Buy trades:** can be used to exit all **Buy** trades when Price touches the lower ATR Stop **Lime-Green** line;
 - **For Confirm Pyramid Sell trades:** can be used to exit all **Sell** trades when Price touches the lower ATR Stop **Orange-Red** line.

10. **SML_HeikenAshi_Exit indicator:** The Price of previously closed Bar only needs to be in the same direction as SML_HeikenAshi_Exit indicator (if enabled); Exit signal when the Bar of SML_HeikenAshi_Exit indicator changes colors.
 - a) **For confirm the Buy/Sell signal:**
 - **For confirm Pyramid Buy trades:** when the Price of previously closed Bar confirmed by Lime bars of SML_HeikenAshi_Exit indicator;
 - **For confirm Pyramid Sell trades:** when the Price of previously closed Bar confirmed by all **Red** bars of SML_HeikenAshi_Exit indicator.
 - b) **For confirm the Exit trades:**
 - **For confirm the exit for all Pyramid Buy trades:** when the Price of previously closed Bar confirmed by **Red** Bars of SML_HeikenAshi_Exit indicator;

- **For confirm the exit for all Pyramid Sell trades:** when the Price of previously closed Bar confirmed by **Lime** Bars of SML_HeikenAshi_Exit indicator.

3) Pyramid Trades Exit Strategies:

- 1) According to TP / SL setting of initial trades; **And/ Or;**
- 2) Exit at the opposite direction when SML_SR-Filters indicator arrow appears; **And/ Or;**
- 3) When the Price closes back inside and touch on the top (**Aqua line color**) or bottom (**Yellow line color**) of F1 line of SML_ATR_Channels indicator; **and/ or** when the Price touch on the top (**Blue line color**) or bottom (**Red color**) of F3 lines of SML_ATR_Channels indicator.
Whichever of the above 2 cases comes first; And/ Or;
- 4) Exit Buy trades whenever price breaks below ART Stops level (**Lime-Green line**) and shows bearish trend signals; and Exit Sell trades whenever price breaks above ART Stops level (**Orange-Red line**) and shows bullish trend signals instead; **And/Or;**
- 5) Exit with the SML_PLD-Exit indicator according to its rules.
 - **For confirm the exit for all Buy trades:** can be used to exit for all Buy trades that confirmed by **Red arrow** of indicators;
 - **For confirm the exit for all Sell trades:** can be used to exit for all Buy trades that confirmed by **Dodger-Blue arrow** of indicator
- 6) Exit with the SML_HeikenAshi-Exit indicator according to its rules.
 - **For confirm the exit for all Buy trades:** when the Price of previously closed Bar confirmed by **Red** Bars of SML_HeikenAshi_Exit indicator;
 - **For confirm the exit for all Sell trades:** when the Price of previously closed Bar confirmed by **Lime** Bars of SML_HeikenAshi_Exit indicator

The exit of Pyramid trades needs the coders to make their own customizations using input-menu to select one or more of the 6 strategies outlined above. If there is more than one, then EA will use whichever of the chosen cases comes first. The input-menu of exit of Pyramid Trades are located at Pyramid_Trades_Setting.

4) Conclusion:

- When all the above rules are met allow the EA to open Pyramid trades at the next bar, if set like that and closed; And close the trades according to exit rules stated separately for Pyramid trades.
- When the Pyramid trades is closed with profits; and the Price remains in the F2 Zone of SML_ATR_Channels indicator; EA can open other Pyramid trades according to this rule;

- In the case loss of Pyramid trades, the EA will activate Recovery_Modes to recover;

5) Example:

a. **BUY** of Pyramid trades. EA opens the trades according to the Rules outlined above and is summarized as follows:

- The Price breakout F1 **Yellow line** of the SML_ATR_Channels indicator;
- Price is within the F2 Zone of SML_ATR_Channels indicator;
- The price has touched the Step of Pyramid;
- And the Prices are confirmed by all Buy signals of indicators together, if set like that;
- The Pyramid Buy trades can open in the Bar Zero (0) or next bar (1), if set like that);
- And close all Buy trades according to exit rules stated separately for Pyramid trades.

b. **SELL** of Pyramid trades. EA opens the trades according to the Rules outlined above and is summarized as follows:

- The Price breakout F1 **Aqua line** of the SML_ATR_Channels indicator;
- Price is within the F2 Zone of SML_ATR_Channels indicator;
- The Price has touched the Step of Pyramid;
- And the Prices are confirmed by all Sell signals of indicators together, if set like that;
- The Pyramid Sell trades can open in the Bar Zero (0) or next bar (1), if set like that);
- And close all Sell trades according to exit rules stated separately for Pyramid trades.
-

V. Pyramid Reverse Mode.

1) General Rules to open Pyramid Reverse Trades:

- Pyramid Reverse Trades opens the trading if the market moves in Reverse direction which is usually the opposite direction as the initial trade, Pyramid trades; and each time its Step has been touched;
- Pyramid Reverse Trades can be opened in the condition that all the Initial Trades, Pyramid Trades are closed;
- Pyramid Reverse Trades can open the trading in the F1 zone (Aqua – Yellow color) and F2 Zone (Orange – Dodger-Blue color) and, when the price of the previously closed bar has pulled back and touched the F2 line (Orange – Dodger-Blue color).
- Pyramid Reverse Trades can use indicators such as filters to open trades and, the Pyramid Reverse Trades are always opened in the same direction as all indicators, if all enabled;
- The Pyramid Reverse Trades are opened at Bar Zero or one (0/1), if set like that;
- When the Pyramid Reverse Trades closed with profit and if the Price remains in the F1, F2 Zones of SML_ATR_Channels indicator; EA can open other Pyramid Reverse Trades according to this rule;
- Pyramid Reverse Mode uses separate Take Profit and Stop Loss as same as the format of Pyramid mode;
- In the case of loss Pyramid Reverse Trades, the EA will activate Recovery Mode to recover.
- **Note for Pyramid_Gap:** *How many pips away (profitable) the next Pyramid Trade to be placed: 0.*
(If set by Zero, it means that the Gap of Pyramid Trades is free, the EA can open trades everywhere but based on the signals of the indicators as long as the open position has a profit greater than 0);

2) The Indicators and open trading rules of Pyramid Reverse Mode: The Pyramid Reverse Trades are opened based on the chosen of Entry Strategy and when one or all the indicators below (if set like that) agree on the following rules:

i. For SML_ATR Channels indicator

- a. **Conservative Strategy:** When the Price has been pulled back and the previously closed Bar touched Upper F1 line (Aqua line) or Bottom F1 line (Yellow line) of SML_ATR Channels indicator.
 - **For Pyramid Reverse Buy trades:** When the previously closed Bar touched Bottom F1 line (Yellow line) and, its price is **higher**, the EA opens the **Buy** position at the next bar, if set like that.

- **For Pyramid Reverse Sell trades:** When the previously closed Bar touched upper F1 line (Aqua line) and, its price is **lower**, the EA opens the **Sell** position at the next bar, if set like that.

Note for Conservative Strategy of SML_ATR_Channels indicator:

- **Buy Pyramid Reverse Trades** positions are always **higher** than Bottom F1 Line (Yellow line).
- **Sell Pyramid Reverse Trades** positions are always **lower** than Upper F1 Line (Aqua line).

- b. **Aggressive Strategy:** When the Price has been pulled back and the previously closed Bar touched Upper F2 line (DodgerBlue line) or Bottom F2 line (Orange line) of SML_ATR Channels indicator.

- **For Pyramid Reverse Buy trades:** When the previously closed Bar touched Bottom F2 line (Orange line) and, its price is **higher**, the EA opens the **Buy** position at the next bar, if set like that.
- **For Pyramid Reverse Sell trades:** When the previously closed Bar touched upper F2 line (DodgerBlue line) and, its price is **lower**, the EA opens the **Sell** position at the next bar, if set like that.

Note for Aggressive Strategy of SML_ATR_Channels indicator:

- **Buy Pyramid Reverse Trades** positions are always **higher** than Bottom F2 Line (Orange).
- **Sell Pyramid Reverse Trades** positions are always **lower** than Upper F2 Line (DodgerBlue).

- ii. **For SML_ArrZZX2 indicator:** The dots and arrow appear and the Price of previously closed Bar in the same direction as SML_ArrZZX2 indicator (if enabled);

a. **For Pyramid Reverse Entry Signals:**

- **For Pyramid Reverse Buy signal:** When the Blue arrow appears and the current Bar is closed, EA opens the **Buy** trades at the next Bar, if set like that;
- **For Pyramid Reverse Sell signal:** When the Magenta arrow appears and the current bar is closed, EA opens the **Sell** trades at the next Bar, if set like that;

b. **For Confirm Pyramid Reverse Signals:**

- **For confirm Pyramid Reverse Buy signal:** when the Price of previously closed Bar confirmed by **Blue dot** of SML_ArrZZX2 indicator;
- **For confirm Pyramid Reverse Sell signal:** when the Price of previously closed Bar confirmed by **Red dot** of SML_ArrZZX2 indicator.

- iii. **For SML_PLD-Entry indicator:** The Price of previously closed Bar only needs to be in the same direction as SML_PLD-Entry indicator is valid (if enabled);
 - a. **For Pyramid Reverse Entry Signals:**
 - **For Pyramid Reverse Buy signal:** Entry **Blue Buy arrow** signal confirmed by all Bars of indicator are **Blue**, then **Buy** trade open right at the current Bar (0), if set like that;
 - **For Pyramid Reverse Sell signal:** Entry **Red Sell arrow signal** confirmed by all Bars of indicator are **Red**, then **Sell** trade open right at the current Bar (0), if set like that.
 - b. **For Confirm Pyramid Reverse Signals:**
 - **For confirm Pyramid Reverse Buy signal:** when the Price of previously closed Bar confirmed by all **Blue Squares** Bars of SML_PLD-Entry indicator;
 - **For confirm Pyramid Reverse Sell signal:** when the Price of previously closed Bar confirmed by all **Red Squares** Bars of SML_PLD-Entry indicator.

- iv. **For SML_4BARS-MTF indicator:** The Price of previously closed Bar only needs to be in the same direction as SML_4BARS-MTF indicator is valid (if enabled);
 - a. **For Pyramid Reverse Entry Signals:**
 - **For Pyramid Reverse Buy signal:** When the **Lime-Green arrow** appears and the current Bar is closed, EA opens the **Buy** trades at the next bar, if set like that;
 - **For Pyramid Reverse Sell signal:** When the **Red arrow** appears and the current Bar is closed, EA opens the **Sell** trades at the next bar, if set like that;
 - b. **For Confirm Pyramid Reverse Signals:**
 - **For confirm Pyramid Reverse Buy signal:** when the Price of previously closed Bar confirmed by 3 of 4 **Green Squares** of SML_4BARS-MTF indicator;
 - **For confirm Pyramid Reverse Sell signal:** when the Price of previously closed Bar confirmed by 3 of 4 **Red Squares** of SML_4BARS-MTF indicator.

- v. **For SML_TMATS-Alert indicator:** The Price of previously closed Bar only needs to be in the same direction as SML_TMATS-Alert indicator (if enabled);
 - a. **For Pyramid Reverse Entry Signals:**

- **For Pyramid Reverse Buy signal:** When the **Lime arrow** appears and the current Bar is closed, EA opens the **Buy** trades at the next Bar, if set like that;
 - **For Pyramid Reverse Sell signal:** When the **Red arrow** appears and the current bar is closed, EA opens the **Sell** trades at the next Bar, if set like that.
- b. **For Confirm Pyramid Reverse Signals:**
- **For confirm Buy signal:** when all colors of upper Bars in a position higher than Zero-line of SML_TMATS-Alert indicator; and the Price of previously closed Bar goes Up is **confirmed Buy signal**;
 - **For confirm Sell signal:** when all colors of bottom Bars in a position lower than Zero-line of SML_TMATS-Alert indicator; and the Price of previously closed Bar goes Down is **confirmed Sell signal**.
- vi. **For SML_WCCI-L5 indicator** (How does the indicator work? has been described above, page 2).
- a. The Price of the previously closed Bar, based on the **EntryCCI** line (Crimson color) /or **TrendyCCI** bar (option) touched the Zero-line and is in range from (-50 to +50), if set like that, is valid.
- **For Pyramid Reverse Buy Signal:** If the Price has touched and is higher than the Zero line and is in the range from (0 to +50), if set like that; and the EA allowed opens the **Buy** position at the next Bar, if enabled;
 - **For Pyramid Reverse Sell Signal:** If the price has touched and is lower than the Zero line and is in the range from (0 to -50), if set like that; and the EA allowed opens the **Sell** position at the next Bar, if enabled.

AND/OR; whichever comes first.

- b. The price of the previously closed Bar, based on the **EntryCCI** line (Crimson color) /or **TrendyCCI** bar (option) don't touch the Zero-line, but has touched and is in the range from (-50 to +50), if set like that, is valid.
- **For Pyramid Reverse Buy Signal:** If the price has not touched the Zero-line, but is in the range from (0 to +50), if set like that; and the EA allowed opens the **Buy** position at the next bar, if enabled;
 - **For Pyramid Reverse Sell Signal:** If the price has not touched the Zero line but is in the range from (0 to -50), if set like that; and the EA allowed opens the **Sell** position at the next bar, if enabled.
- c. **Note for EntryCCI/ TrendyCCI; and the Range from (-50 to +50):**

- The parameters both of **EntryCCI** and **TrendyCCI** and the Range from (-50 to +50) needs the coder to customize and these input-menus located in SML_WCCIL5 indicator setting.
 - If the **TrendyCCI** parameter is selected, it means that the EA allowed to open the trade whenever these Bars (**Yellow bars**) of **TrendyCCI** appear, if set like that.
- vii. **SML_TrendAlt_3 indicator:** The Price of previously closed Bar only needs to be in the same direction as SML_TrendAlt_1 indicator is valid (if enabled);
- **For Pyramid Reverse Buy Signal:** when **Dodger-Blue** color line in a position higher than Zero-line while Zero-line **Red** color; and the Price of previously closed Bar is higher than Zero-line, is **Buy** trades;
 - **For Pyramid Reverse Sell Signal:** when **Red** color line in a position lower than Zero-line while Zero-line **Dodger-Blue** color; and the Price of previously closed Bar is lower than Zero-line, is **Sell** trades;
- viii. **For SML_PLD-Exit indicator:** The Price of previously closed Bar only needs to be in the opposite direction as SML_PLD-Exit indicator; Exit signal when exit arrow of SML_PLD-Exit indicator appears (if enabled).
- **For confirm the exit for all Pyramid Reverse Buy trades:** can be used to exit for all Buy trades that confirmed by **Red arrow** of indicators;
 - **For confirm the exit for all Pyramid Reverse Sell trades:** can be used to exit for all Buy trades that confirmed by **Dodger-Blue arrow** of indicator.
- ix. **For SML_ATR-Stop indicator:** The Price of previously closed Bar only needs to be in the same direction as SML_ATR-Stop indicator (if enabled); Exit signal when dot of SML_ATR-Stop indicator changes colors.
- **For Pyramid Reverse Buy trades:** can be used to exit all **Buy** trades when Price touches the lower ATR Stop **Lime-Green** line.
 - **For Pyramid Reverse Sell trades:** can be used to exit all **Sell** trades when Price touches the lower ATR Stop **Orange-Red** line.
- x. **SML_HeikenAshi_Exit indicator:** The Price of previously closed Bar only needs to be in the same direction as SML_HeikenAshi_Exit indicator (if enabled); Exit signal when the Bar of SML_HeikenAshi_Exit indicator changes colors.
- a. **For Confirm Pyramid Reverse Signals:**
- **For Confirm Pyramid Reverse Buy signal:** when the Price of previously closed Bar confirmed by Lime bars of SML_HeikenAshi_Exit indicator;

- **For Confirm Pyramid Reverse Sell signal:** when the Price of previously closed Bar confirmed by all **Red** bars of SML_HeikenAshi_Exit indicator.

b. For Confirm Exit of Pyramid Reverse Trades:

- **For confirm the exit for all Pyramid Reverse Buy trades:** when the Price of previously closed Bar confirmed by **Red** Bars of SML_HeikenAshi_Exit indicator;
- **For confirm the exit for all Pyramid Reverse Sell trades:** when the Price of previously closed Bar confirmed by **Lime** Bars of SML_HeikenAshi_Exit indicator.

3) Pyramid Reverse Trades Exit Strategies:

- 1) According to TP / SL setting of initial trades; **And/ Or;**
- 2) Exit at the opposite direction when SML_SR-Filters indicator arrow appears; **And/ Or;**
- 3) When the Price closes back inside and touch on the top (**Aqua line color**) or bottom (**Yellow line color**) of F1 line of SML_ATR_Channels indicator; **and/ or** when the Price touch on the top (**Blue line color**) or bottom (**Red color**) of F3 lines of SML_ATR_Channels indicator.
Whichever of the above 2 cases comes first; And/ Or;
- 4) Exit Buy trades whenever price breaks below ART Stops level (**Lime-Green line**) and shows bearish trend signals; and Exit Sell trades whenever price breaks above ART Stops level (**Orange-Red line**) and shows bullish trend signals instead; **And/Or;**
- 5) Exit with the SML_PLD-Exit indicator according to its rules.
 - **For confirm the exit for all Pyramid Reverse Buy trades:** can be used to exit for all Buy trades that confirmed by **Red arrow** of indicators;
 - **For confirm the exit for all Pyramid Reverse Sell trades:** can be used to exit for all Buy trades that confirmed by **Dodger-Blue arrow** of indicator
- 6) Exit with the SML_HeikenAshi-Exit indicator according to its rules.
 - **For confirm the exit for all Pyramid Reverse Buy trades:** when the Price of previously closed Bar confirmed by **Red** Bars of SML_HeikenAshi_Exit indicator;
 - **For confirm the exit for all Pyramid Reverse Sell trades:** when the Price of previously closed Bar confirmed by **Lime** Bars of SML_HeikenAshi_Exit indicator

The exit of Pyramid Reverse trades needs the coders to make their own customizations using input-menu to select one or more of the 5 strategies outlined above. If there is more than one, then EA will use whichever of the chosen cases comes first. The input-menu of exit of Pyramid Reverse Trades are located at Pyramid_Reverse_Trades_Setting.

4) Example:

a. **BUY of Pyramid Reverse Trades.** EA opens the trades according to the Rules outlined above and is summarized as follows:

- If conservative strategy is chosen. When the Price moves and touched the Bottom F1 **Yellow line** of the SML_ATR_Channels indicator; and its Price is higher, the EA opens the Buy position at the next bar, if set like that.
- If aggressive strategy is chosen. When the previously closed Bar touched Bottom F2 **Orange line** of the SML_ATR_Channels indicator; and its Price is higher, the EA opens the Buy position at the next bar, if set like that.
- Price is within the F1, F2 Zones of SML_ATR_Channels indicator;
- And the Price must be consented by all Buy signal of indicators, if set like that;
- **BUY** initial trades can open in the Bar Zero (0) or next bar (1), If set like that;
- And close Buy trades according to exit rules stated separately for Pyramid Reverse Trades.

b. **SELL of Initial trades.** EA opens the trades according to the Rules outlined above and is summarized as follows:

- If conservative strategy is chosen. When the Price moves and touched the Upper F1 **Aqua line** of the SML_ATR_Channels indicator; and its Price is higher, the EA opens the **Sell** position at the next bar, if set like that.
- If aggressive strategy is chosen. When the previously closed Bar touched Upper F2 **DodgerBlue line** of the SML_ATR_Channels indicator; and its Price is higher, the EA opens the **Sell** position at the next bar, if set like that.
- Price is within the F1, F2 Zones of SML_ATR_Channels indicator;
- The Price has touched the Step of Pyramid;
- And the Price must be consented by all Sell signal of indicators, if set like that;
- **BUY** Pyramid reverse trades can open in the Bar Zero (0) or next bar (1), If set like that;
- And close Sell trades according to exit rules stated separately for Pyramid Reverse Trades.

VI. Recovery Mode.

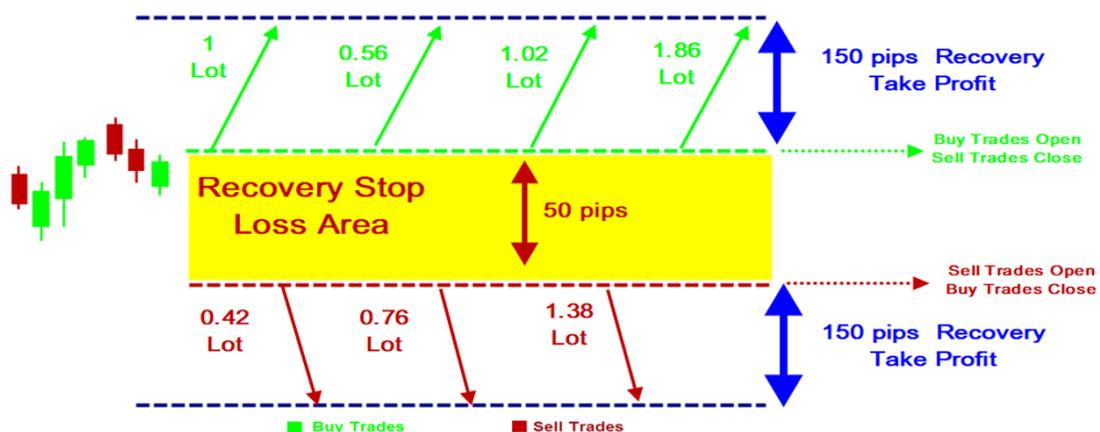
The Recovery Algorithm will commence if the previous trades (Initial Trade or Grid Trades) have been losing. The trades will close with a loss and then the recovery mode will begin.

Assume trader have one trade active with a given lot, we assign to it a Recovery Stop Loss Value and Recovery Take Profit Value.

Recovery Stop Loss: is the number of pips that the trade can lose. Once that loss is reached that trade is closed with a loss and a new trade is opened right after to the Opposite Direction with a new lot.

Recovery Take Profit is the number of pips the trade needs to win for the recovery to be completed.

It is demonstrated in the picture bellow:



Assume a buy trade with 1 lot a recovery Stop Loss of 50 pips and Recovery Take Profit 150 pips. Each time the trade loses 50 pips it will close, and a new trade will open in the opposite direction with a target of 150 pips. Eventually the trade will reach the 150 pips and recover the losses of all previous trades.

It is important to note that at all stages **only one trade is kept open** as compared to hedging recoveries this has the benefit of incurring less spread commission, swap fees and execution problems that occur when trades in both directions are active.

Notice how the lots change at each time a new trade is opened. They are calculated so as to cover the losses of all the previous trades upon the end of

recovery. The first trade 1 Lot will make a loss of -500USD (1Lot x10usd/pips x 50pips =500usd) if the stop loss is reached while the second trade of 0.42 Lot will make a profit of 630USD (1 Lot x 10usd/pip x 150 pips=630usd) which will give a combined profit of 130USD. At each stage the stop loss was reached the next trade lot will have to increase as the losses increase.

The smaller the ration between Recovery Take Profit/Recovery Stop Loss the faster the Lots will increase. Try to select a Recovery Stop Loss large enough so it allows enough room for the market to move without hitting it. This is especially important in volatile event where the market can move up and down several times.

- Recovery_Stop_Loss: How many pips the last recovery trade can lose before a new trade open;
- Recovery_Take_Profit: How many pips the last recovery should win to end the recovery;
- Use_Recovery_Stop_Loss: Applies stop loss instead of hidden stop loss;
- Use_Recovery_Take_Profit: Applies take profit instead of hidden take profit.
- Enable_Recovery_Trailing_Stop: Enables Trailing Stop;
- Recovery_Trailing_Stop_Start_Level: Pips to be won for the Trailing Stop to be activated;
- Recovery_Trailing_Stop_Distance: Trailing stop step pips.

Set the above two to false if you want to hide your exits from the broker.

Optional: Increasing/Decreasing the Lots/Profits of the recovery

Recovery_Lot_Calculation_Mode: Set which method to use for calculating the lots during the recovery. The following 3 options are available.

1. Profit in Pips Factor: The profit at the end of the recovery to be equal to the initial trade lot multiplied by the number of pips specified.

Assume your start lot was 1 Lot and you put the value as 10. 1 Lot winning 10 pips on EURUSD means 100 USD (1x10 USD/lot x 10pips = 100) The EA will put lots so at the end of recovery the net profit is 100 USD.

- i. Profit in Amount: The profit at the end of the recovery to be equal to a specified amount.
- ii. Lot_Multiplier: Each trade is a multiple of the previously closed trade.

Note: VERY IMPORTANT ABOUT THE RECOVERY

- The Trade Count and the Realized Loss.
Each time a trade gets closed the EA will check the previous closed trades to determine how many consecutive trades have closed with a loss to determine how many trades have been opened and closed during the recovery, the Trade Count and the total Realized Loss. This information is displayed on the chart and is needed by the EA to determine what the next lot will be and for risk management.
- If a trade during the recovery is closed manually, even with a tiny profit then the EA will assume the recovery has been completed as the last closed trade is not in loss. Hence it is important not to manually close the recovery trades as this will happen if they are in profit.

VII. Risk Settings

Several risk options are available for managing the recovery and one for the grid (if you want to trade only using the grid). These options will control how many trades can be opened in the recovery process, losses that can be accepted or terminate the recovery earlier if a profit is reached prior to the final pips target. The Risk Settings apply on a per currency basis. The profit or loss related options are in Net Profit which involves the previous and active trades of the recovery cycle.

If a loss option is triggered after the trades get closed a blank stop order at level 999999 will get placed and deleted to signal the end of the recovery.

- **Cooldown_Minutes:** Delay opening a new initial trade in minutes since its last closed trade;
- **Max_Orders:** Max trades that can be opened at a recovery cycle at currency **Max_Loss_Amount:** Ends the symbol's recovery once its net recovery losses reach this amount. (Positive Value);
- **Close_All_at_This_Profit:** End the symbol's recovery once its net recovery profit reaches this amount;
- **Enable_Profit_Trailing:** Applies a trailing stop based on the net recovery profits. Can be used to avoid having a recovery that is in profit reversing against you and opening more trades;
- **Profit_Trailing_Trade_Start:** The number of trades after which the trailing profit can be used;
- **Profit_Trailing_Amount_Start:** Once this profit amount is reached the trailing option gets triggered;
- **Profit_Trailing_Amount_Step:** Once the max profit amount made drops by that much trades will close;
- **Enable_Earlier_Closing:** Terminates the recovery earlier after several trades a net profit is reached;
- **Earlier_Closing_Trades:** The number of trades after which the total profit amount is changed to;
- **Earlier_Closing_Profit_Amount:** The new total profit amount target.

VIII. Multicurrency Limits

These are limits to be set when using the dashboard mode to prevent the opening of additional initial trades until the limits are met. The purpose is to allow enough margin and money in the account to recover the active trades

- Max_Active_Symbols: Max symbols to have active trades
- Max_Trades_For_Signle_Symbol: Max recovery trades to be reached in a currency;
- Max_Lots_For_Signle_Symbol: Max Net Lots to be reached in a currency;
- Max_Margin; Max Margin to be used in the account;
- Max_Floating_Loss: Max floating loss in the account (Positive number)
- Min_Margin_Level: Minimum margin level in the account;

The EA will display on the chart what the values are for the above parameters to see if the limits are held.

IX. Dashboard Mode.

Over here you select which currencies the EA will manage. Prior to selecting a currency make sure it is active in your market watch (Right Click on the Left Side of your MT4 on the Market Watch and select Show All) as otherwise it cannot be traded. Ensure your PC/VPS has enough power to run the number of currencies you select as more power is needed. The Light Mode when set to true will try and reduce the computational power.

- Symbols_Used: How many of the symbols to be used. The EA will select this number of Symbols based on the order they were written;
- Symbol #: Symbol at position #;
- Symbol_prefix: If your broker has a prefix in front of the name of ALL THE INPUT Symbol # eg. ECN-EURUSD, you can write this prefix (ECN-) here to inform the EA to seek for that instrument instead.
- Symbol_suffix: If your broker has a suffix after the name of ALL THE INPUT Symbol # eg. EURUSD.micro, you can write this suffix here (. micro) to inform the EA to seek for that instrument instead.

Note: You can either write all the Symbol # with their full name including suffix and prefix (eg ECN-EURUSD.micro) and leave suffix and prefix blank or write the Symbol # without them and enter them once in the respective field.

X. Filters

Spread and Time Filters can be applied.

- Use_Spread_Filter: Prevents trades when spread is too high
- Max_Spread: Max allowed spread;
- Use_Time_Zone_1: Set a time zone for initial trades to open. Uses the broker's time.

- Time_Zone_1_Start: Start time for trades to be allowed;
- Time_Zone_1_End: End time for trades to be allowed.
(They only apply for the initial trade).
- Close_Trades_on_Friday: Closes the trades at the end of the Friday.
- Friday_Close_Time: Friday trades closing time.
- Trade_Fridays: Allows initial trades on Friday.

The left side will display information about each symbol's trade while the right side is the account's total statistics and limits.

XI. Display and Graphics

Information about the trades and graphics are displayed on the chart

- Symbol: Shows the symbol's names.
- Count: First number is the Recovery Trade Count while in the bracket the number of active trades. When Double Entry is active, and both trades are active the Trade Count is 1 as is the initial trade.
- Buys: Number of buy trades followed by their lot size. When Double Trade is active in the bracket shows the current pips won by the buy trade followed by its max pips won.
- Sells: Number of sell trades followed by their lot size. When Double Trade is active in the bracket shows the current pips won by the sell trade followed by its max pips won.
- PipsWon: Shows Pips Won followed by the Max Pips by the last active trade (Recovery Trade or Grid Trade).
- NetLot: The active Net Lot (Buy-Sell) of the currency.
- Profit: The first number is the symbols floating profit, the second is the realized closed profit during the recovery while the third is the sum of the two (Net Profit). You can use this to track how much must be recovered for the symbol.
- Counter: Shows the number of counter active trades, followed by the pips won of the last counter trade. The third number is the Average Open Price of grid Counter Trades (when active) followed by the average pips won of those trades.

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e) **EA_Setting_Input Menu**

i. **General**

- ✓ Close All: True/False;
- ✓ Force Reset Trade: Use it to set the recovery cycle to 0
- ✓ Max allowed slippage: 2
- ✓ EA Magic number: 0
- ✓ Any_Magic: True/False;
- ✓ Orders comment
 - Initial Trades comment: IniTd
 - InTd Buy Trades comment: B-IniTd
 - InTd Sell Trades comment: S-IniTd
 - Pyramid Trades comment: Pyra
 - Pyramid Reverse Trades comment: Pyra-R
 - Grid Trades comment: Grid
 - Recovery Trades comment: Rec

ii. **Symbols**

- Dashboard Mode: True/False;
- Symbols Use_1: EURUSD, GBPUSD, USDCHF, EURJPY, GBPJPY, USDJPY, EURGBP, AUDUSD, NZDUSD, USDCAD, EURAUD, GBPAUD, EURNZD, GBPNZD, GBPCAD, GBPCHF, EURCAD, AUDCAD, AUDCHF, AUDNZD, AUDJPY, NZDCHF, NZDCAD, NZDJPY, CADCHF, CADJPY, CHFJPY, EURCHF
- Symbols Use_2:
- Symbols Use_3:

iii. **Initial_Entry_Setting**

- Entry_Strategy: *How the EA enters the first time. Set to External Trade to use with own trades: Conservative /or Aggressive /or External_trades;*
- Lot: *Lot size fixed amount when auto lot is false;*
- Auto Lot: *Start Lot is calculated as % from leveraged equity;*
- Lot_Percents: *When Auto Lot is true;*

Note: *When using with al Trade/EA trader don't have to modify Lot Size. The EA will automatically read the lot size of the active trades;*

- Initial Take Profit: *Take Profit in pips;*
- Initial_Stop_Loss: *Stop Loss in pips. Does not apply when grid mode is selected;*
- Use_Initial_Stop_Loss: *Enables placing a stop loss instead of using a hidden stop loss.*

- Enable_Trailing_Stop: *Enables Trailing Stop;*
- Trailing_Stop_Start_Level: *Pips to be won for the Trailing Stop to be activated;*
- Trailing_Stop_Distance: *Trailing stop step pips If you are unfamiliar with how a trailing stop works you can learn about it here.*
- WCCI-L5 Entry: Enabled/Disabled
 - CCI-Trendy: True/False;
 - CCI-Entry: True/False;*(to choose CCI_Entry or CCI_Trendy signals for Initial_trades).*
- Initial_Entry_Trend_Filters: Enabled/Disabled.
 - ✓ Zero-line of SML_WCCI-L5: True/False. *(This customize uses the Zero line (EMA period) of SML_WCCI-L5 indicator to filter trends for initial entry trades);*
 - ✓ SML_HeikenAshi_Exit: True/False. *(This customize to use the HeikenAshi_Exit indicator to filter trends for initial entry trades).*
- Initial_Signal_Bar: Zero (0) or One (1) *(Initial_trades can customize open trades at bar Zero (0) or 1).*

iv. **Initial_Exit_Strategies_Setting** (As described, page 9): Enabled/Disabled.

1. Use SML_ATR-Stop indicator: True/False;
2. Use SML_ATR_Channels indicator: True/False;
3. Use SML_SR-Filters indicator: True/False;
4. Use SML_PLD-Exit indicator: True/False;
5. Use SML_HeikenAshi-Exit indicator: True/False;
6. Use their own of TP / SL of each Trade Mode;

v. **Pyramid_Setting**: Enabled /Disabled.

- Pyramid_Additinal_Trades: *Number of additional Pyramid Trades (profitable) to be placed: 5 (default);*
- Pyramid_Gap: *How many pips away (profitable) the next Pyramid Trade to be placed: 0 (If set by Zero, it means that the Gap is free, the EA can open trades everywhere but based on the signals of the indicators as long as the open position has a profit greater than 0);*
- Pyramid_Multiplier: *How many times larger compared to the previous trade the next Pyramid Trade will be: 1 (default);*
- Pyramid_Stop_Loss (Pips): *The loss of Pips is calculated by the average of the profits of opened Pyramid trades: 5 (default);*

- Pyramid_Stop_Loss_Trade. *The minimum number that Pyramid Trades must open before stop loss is attached: 5 (default);*
 - Final_Pyramid_TP (Pips): *The final total profit is calculated by Pips of all opened Pyramid Trades: 50 (default).*
 - Pyramid_Signal_Bar: *Zero /One (0/1).*
- vi. **Pyramid_Trend_Filters:** *Enabled/Disabled Trend Filters indicators for Pyramid Trades.*
- *Zero-line of SML_WCCI-L5: True/False. (This customize uses the Zero line (EMA period) of SML_WCCI-L5 indicator to filter trends for Pyramid trades);*
 - *SML_HeikenAshi_Exit: True/False. (This customize to use the HeikenAshi_Exit indicator to filter trends for Pyramid trades).*
- vii. **Pyramid_Exit_Strategies_Setting:** *(As described on page 15-16) Enabled/Disabled.*
1. Use SML_ATR-Stop indicator: True/False;
 2. Use SML_ATR_Channels indicator: True/False;
 3. Use SML_SR-Filters indicator: True/False;
 4. Use SML_PLD-Exit indicator: True/False;
 5. Use SML_HeikenAshi-Exit indicator: True/False;
 6. Use their own of TP / SL of each Trade Mode;
- viii. **Pyramid_Reverse_Setting:** *Enabled /Disabled.*
- Pyramid_Reverse_Additinal_Trades: *Number of additional Pyramid Reverse Trades (profitable) to be placed: 5 (default);*
 - Pyramid_Reverse_Gap: *How many pips away (profitable) the next Pyramid Reverse Trade to be placed: 0 (If set by Zero, it means that the Gap is free, the EA can open trades everywhere but based on the signals of the indicators as long as the open position has a profit greater than 0)*
 - Pyramid_Reverse_Multiplier: *How many times larger compared to the previous trade the next Pyramid Reverse Trade will be: 1 (default);*
 - Pyramid_Reverse_Stop_Loss (Pips): *The loss of Pips is calculated by the average of the profits of opened Pyramid Reverse Trades: 5 (default);*
 - Pyramid_Reverse_Stop_Loss_Trade: *The minimum number that Pyramid Reverse Trades must open before stop loss is attached: 5 (default);*

- Final_Pyramid_Reverse_TP (Pips): *The final total profit is calculated by Pips of all opened Pyramid Reverse Trades: 50 (default).*
 - Pyramid_Reverse_Signal_Bar: *Zero /One (0/1).*
- ix. **Pyramid_Reverse_Trend_Filters:** *Enabled/Disabled Trend Filters indicators for Pyramid Reverse Trades.*
- *Zero-line of SML_WCCI-L5: True/False. (This customize uses the Zero line (EMA period) of SML_WCCI-L5 indicator to filter trends for Pyramid trades);*
 - *SML_HeikenAshi_Exit: True/False. (This customize to use the HeikenAshi_Exit indicator to filter trends for Pyramid trades).*
- x. **Pyramid_Exit_Strategies_Setting** *(As described on page 23): Enabled/ Disabled.*
- *Use SML_ATR-Stop indicator: True/False;*
 - *Use SML_ATR_Channels indicator: True/False;*
 - *Use SML_SR-Filters indicator: True/False;*
 - *Use SML_PLD-Exit indicator: True/False;*
 - *Use SML_HeikenAshi-Exit indicator: True/False;*
 - *Use their own of TP / SL of each Trade Mode;*
- xi. **Recovery_Setting:**
- *Recovery Stop Loss: How many pips the last recovery trade can lose before a new trade open;*
 - *Recovery Take Profit: How many pips the last recovery should win to end the recovery;*
 - *Use_Recovery_Stop_Loss: Applies stop loss instead of hidden stop loss;*
 - *Use_Recovery_Take_Profit: Applies take profit instead of hidden take profit;*
 - *Enable_Recovery_Trailing_Stop: Enables Trailing Stop;*
 - *Recovery_Trailing_Stop_Start_Level: Pips to be won for the Trailing Stop to be activated;*
 - *Recovery_Trailing_Stop_Distance: Trailing stop step pips.*
 - *Recovery_Lot_Calculation_Mode: Set which method to use for calculating the lots during the recovery.*

The following 3 options are available.

1. *Profit in Pips Factor: The profit at the end of the recovery to be equal to the initial trade lot multiplied by the number of pips specified;*

2. Profit in Amount: *The profit at the end of the recovery to be equal to a specified amount;*
3. Lot_Multiplier: *Each trade is a multiple of the previously closed trade.*

xii. **Money Management:**

i. **Risk Management**

1. Close_All_When_Floating_Loss: 0
2. Close_Symbol_Trades_When_Net_Profit: 0

ii. **MultiCurrency_Risk_Management**

3. Max_Active_Symbols: 28
4. Max_Symbols_Lots: 100
5. Max_Floating_Loss: 9999999

iii. **Action on Trigger**

6. Action on Trigger: True/False
7. Equity Drops Below Amount: 0
8. Equity Reaches Above Amount: 0
9. Equity Loss Percent: 0
10. Equity Profit Percent: 0
11. Close Trades and Orders (0 disable): 0
12. Disable All Expert Advisors (0 disable): 0
13. Close Metatrader Completely (0 disable): 0
14. Cooldown_Minutes: 0

xiii. **Spread Filter:**

- Use Spread Filter: True/False
- Max_Spread: 5

xiv. **Time Filter:**

- Use_Time_Zone_1: True/False;
- Time_Zone_1_Start: 00:00;
- Time_Zone_1_End: 12:00;
- Use Time Zone_2: True/False;
- Time_Zone_2_Start: 00:00;
- Time_Zone_2_End: 12:00;
- Use Time Zone_3: True/False;
- Time_Zone_3_Start: 00:00;
- Time_Zone_3_End: 12:00;
- Close_Trades_on_Friday: True/False;
- Friday_Close_Time: 22:30;
- Trade_Friday: True/False.

xv. **Dashboard and Display Setting**

- Show Comment on Chart: True/False;
- Text Color:0;
- Font Size:0;
- Anchor Conner: 0;
- Offset from Conner, pixels: 0;
- Display Update: True/False;
-
- *(And another Dashboard and Display Setting, in the opinion of the coder, all putting here).*

xvi. **Indicators_Setting:**

(All parameters available in the input-menu of each indicator need to be built-in to EA by the coder and put all them here along with other customizations required as mentioned above session (1.b) and in this description).

For Example:

| SML_WCCI | 20. SML WCCI SETTINGS |
|--|----------------------------|
| <input type="checkbox"/> UseWCCI | true |
| <input type="checkbox"/> WCCI_SignalBar | 1 |
| <input type="checkbox"/> TrendCCI_Period | 14 |
| <input type="checkbox"/> EntryCCI_Period | 5 |
| <input type="checkbox"/> LSMAPeriod | 25 |
| <input type="checkbox"/> EMAPeriod | 60 |
| <input type="checkbox"/> Trend_period | 5 |
| <input type="checkbox"/> text1 | ----- |
| <input type="checkbox"/> text2 | Mode 1 Shows LSMA hide EMA |
| <input type="checkbox"/> text3 | Mode 2 Shows EMA hide LSMA |
| <input type="checkbox"/> MODE | 1 |
| <input type="checkbox"/> text4 | ----- |
| <input type="checkbox"/> ZeroLineCross_Alert | false |
| <input type="checkbox"/> AlertOnlySound | false |
| <input type="checkbox"/> Sound | alert2.wav |
| <input type="checkbox"/> SendMailPossible | false |
| <input type="checkbox"/> CountBars | 500 |
| <input type="checkbox"/> WCCI_UpLimit | 50.0 |
| <input type="checkbox"/> WCCI_DnLimit | -50.0 |

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