



THV expert advisor is based on the THV trading system which has been developed by Cobraforex.

***THV Trading System Basic Rules:-***

**Long signal:**

- Price is above coral.
- Price above Ichimoku cloud.
- Fast trix is above slow trix.
- Fast and slow trix go upwards. Optionally, fast trix is above zero.

**Short signal:**

- Price is below coral.
- Price is below Ichimoku cloud.
- Fast trix is below slow trix.
- Fast and slow trix go downwards. Optionally, fast trix is below zero.

**Exits:**

When fast trix changes color (or imax cross) and/or price touches a known good resistance/support level.

## Features Included In V 0.6:-

- THV3 Ffcal is called once for each news event to prevent excessive CPU and Bandwidth usage.
- Maximum spread filter for opening an order.
- Orders near daily pivot are taken only if they are away more than breakeven.
- MTF indicator based signals can use closed or unclosed candle for entry or exit.
- Harmonic patterns.
- If an order fails to close the EA tries continuously until it succeeds.
- MTF indicators have a 3 digits value. The first digit has the same meaning as previously. The second digit is used for entries and the third one for exits. 0 means an unclosed candle is used and 1 a closed one.

# Entries:-

## Coral Related Settings:-

- **PriceCrossCoral:** When set to True, EA will take a trade only if Price is above (long) / below (short) coral.
- **CrossCoralPips:** When above setting is True, this setting will define how many pips Price should be above/below coral. If the above setting is false, this setting is also ignored.

### EXAMPLE:-

*When PriceCrossCoral = true and CrossCoralPips = 10, For EA to consider a valid signal the Price has to be at least 10 pips above / below the coral for long / short respectively.*

## Ichimoku Cloud Related Settings:-

- **PriceCrossIchimoku:** When set to True, EA will take a trade only if Price is above (long) / below (short) Ichimoku cloud.
- **MinCrossIchimokuPips:** When above setting is True, this setting will define how many pips Price should be above/below Ichimoku cloud. If the above setting is false, this setting is also ignored.
- **MaxCrossIchimokuPips:** Price should not be beyond Ichimoku cloud at the time of cross plus the defined pips. *If it is set to 0 this condition is not taken into account.*

### EXAMPLE:-

*When PriceCrossIchimoku = true, MinCrossIchimokuPips = 5 and MaxCrossIchimokuPips = 10 For EA to consider a valid signal the Price has to be minimum 5 pips and a maximum of 10 pips, above / below the Ichimoku cloud for long / short respectively. MaxCrossIchimokuPips could be used to avoid late entries, where there has been a fast run up.*

## Trix Related Settings:-

- **FastSlowTrixCross:** Fast trix should be above / below slow trix for long / short signal.
- **FastTrixFastDirection:** Fast trix of the previous closed candle should have the same direction with the order.
- **SlowTrixFastDirection:** Realtime slow trix should have the same direction with the order.

- **FastTrixFastZeroLevel:** Fast trix should be above/below zero.

**EXAMPLE:-**

When Fast/Slow TrixFastSameDirection = true, this can avoid false entries when there is trix color change happens for only one candle.

- **TrixOverboughtOversold:** When true, if Trix is beyond Overbought/Oversold levels, no trades will be opened, even if there is a valid entry signal. This setting will avoid buying at OB and selling at OS levels.
- **TrixOverboughtLevel:** TrixOBlevel value, this value varies based on TF and setting a proper value is critical for **TrixOverboughtOversold** functionality. No long orders are opened above this level.
- **TrixOversoldLevel:** TrixOSlevel value, this value varies based on TF and setting a proper value is critical for **TrixOverboughtOversold** functionality. No short orders are opened below this level.

**EXAMPLE:-**

To identify proper TrixOBLevel / TrixOSLevel, load trix to your desired pair / tf, where EA will be running. Check the OB/OS level displayed by trix, and enter those values in these settings. For 1M, most of the pairs I watched had OB / OS level as = 0.00011 / - 0.00011, this could be different for 5M or 15M.

***Trix MTF Related Settings:-***

The Dots of the MTF indicators now can takes a 3 digit value. The first digit has the following values; the second digit is used for entries and the third one for exits. They can take 2 values, 0 for unclosed candle and 1 for a closed candle. First digit can take the following values:

- 0 means it is not used for entry and exit.
  - 1 means it is used for entry only.
  - 2 means it is used for exit only.
  - 3 means it is used for entry and exit.
- **MTFTrixDot#:** #1 means the 1<sup>st</sup> dot, #2 means the 2<sup>nd</sup> dot.
  - **MTFIchimokuDot#:** #1 means the 1<sup>st</sup> dot, #2 means 2<sup>nd</sup> dot.

**EXAMPLE:-**

- ✓ If we want to use MTF for entries and closed candle, then the MTF value would be 110.
- ✓ If we want to use MTF for entries and current open candle, then MTF value would be 100.

We can use this in conjunction with Trix Settings to derive a good edge for the EA to take trades. Combined together, these settings give lot of options to find that edge. I'll try my best to give an example below for a long order.

Let's say below are the conditions for long on 1M. Here I'm assuming you know how to use MTF Settings.

1. Trix Cross should be there.
2. Fast Trix should be above zero.
3. Do not buy at OB level.
4. 15M Slow Trix, 30M FastTrix, 30M Slow Trix should agree with direction of the trade.
5. Trix should use closed candle.
6. Price has to be above Ichimoku Cloud in 15M and 30M.

This can be achieved by setting the following properties.

FastSlowTrixCross = true

FastTrixZeroLevel = true

TrixOverboughtOversold = true (Remember for this to work properly, setting correct TrixOBLevel values is very critical)

MTFTrixDot1 = 110

MTFTrixDot2 = 110

MTFTrixDot3 = 110

MTFTrixDot4 = 000

MTFIchimokuDot1 = 110

MTFIchimokuDot2 = 110

**When all the above condition matches, EA will open a long order. While this is not a complete possible combination, it should give you an idea on how and where to start.**

- **PrevCandleSameDirection:** The previous candle should have the same direction with the order.
- **EntryCandleMaxATR:** Current candle length should not exceed the 14 period ATR multiplied by the defined number. 0 means this condition is not taken into account.
- **SRDistance:** Price should differ from the nearest SR level more than the defined pips. If it is set to 0 this condition is not taken into account.

#### **EXAMPLE:-**

We can use EntryCandleMaxATR to avoid entries where there is a very fast runup/rundown (which can happen easily during news times). Let's say we think that the ideal ATR (14) for 1M on EUR/USD pips is 6 pips. When an entry signal occurs and if the current candle is 15 pips length already, we may not want to enter. So, if we have set this value to 2, then the max pips for the current candle cannot be more than 12 pips for a valid entry signal. Please remember the max number of pips completely depends on ATR(14) value.

We can use SRDistance setting to avoid entries which happen near to S/R levels. Let's say when an entry signal happened, the immediate S/R is 5 pips away, there is high possibility that the price might stall/reverse at that point. We may want to avoid those trades, so we can specify this setting. Say if we set this to 15, EA will open an order only if the nearest S/R is at least 15 pips away.

- **DailyPivotBreakeven:** If BreakEvenPips or BreakEvenAtrMultiplier is above 0, an order is opened only if bid is below for long/above for short the daily pivot for at least the break even trigger distance.
- **MaxSpread:** No orders are opened when spread is greater than the defined pips. 0 means this option is ignored.

### **Patterns Related Settings:-**

The patterns can take the following values:

- ✓ 0 means the pattern is not taken into account for opening an order.
  - ✓ 1 means an order is opened by the presence of this pattern.
  - ✓ 2 means no order is opened by the presence of opposite pattern.  
(For example: If we have a double top, no longs are opened)
  - ✓ 3 means an order is opened by the presence of this pattern unless a pattern with setting value 2 exists.
  - ✓ 4 means the presence of this specific pattern is an absolute prerequisite for opening an order.
- **PinBar:** Pin bar pattern.
  - **EngulfingBar:** Engulfing bar pattern.
  - **DoubleTopBottom:** Double bottom pattern for long orders and double top pattern for short orders.
  - **InsideBar:** Inside bar pattern confirmed by the close of the next bar above/below the high/low of the inside bar.
  - **TrixDivergence:** Divergence of the trix indicator.
  - **Harmonics:** Harmonics patterns for entry.
  - **PreviousBars:** The pattern should have been formed within the defined past bars.

Please use patterns settings, ONLY if you are aware of its importance and have knowledge on how to use it to your edge. If you don't know about patterns, please avoid it.

When a desired pattern is selected, and when an entry signal is triggered, EA will check for the selected pattern settings and will decide whether to open a trade or not. The pattern also has to be present within "PreviousBars" specified when an entry signal is triggered.

### **Exits:-**

- ✓ All indicator based exit signals except iMax, refer to a closed candle.
- ✓ Exits are handled by the rule that whatever comes first closes the trade.

- ✓ Indicator based exits are valid only once, so as an example if an exit signal of iMaxCross occurs, this triggers a partial exit. If the next exit signal that occurs is MTFIchimokuDot1 which is again indicator based, it is ignored.
  - ✓ Exit signals by SR or psych level touch have not this limitation.
- **FastTrixOppositeDirection:** Exit when fast trix has opposite direction to the order.
  - SlowTrixOppositeDirection:** Exit when slow trix has opposite direction to the order.
  - iMaxCross:** Exit on a realtime opposite iMax cross.
  - **PriceTouchSRLevel:** Exit a profitable order when bid touches the nearest support/resistance level.
  - **PriceTouchPsychLevel:** Exit a profitable order when bid touches the nearest psych level. The considered psych levels are .50 and .00. You can also change these values in the EA settings.
  - **MinLevelDistance:** The order opening price and the nearest SR or Psych level should differ for at least the defined pips.

I was not clear on the difference between SRDistance (in Entries) and MinLevelDistance (in Exits) and below is the explanation from XUX on that.

When a SR level is very close to the order opening price an exit can occur almost immediately for a trivial profit. We use MinLevelDistance to avoid this and use the next SR level as an exit, which should be at least MinLevelDistance away.

### Other Settings:-

- **BaseMagicNumber:** Base number used for calculating the magic number. Each timeframe is assigned a different magic number automatically. If more than one chart of the same pair and the same timeframe are opened, the BaseMagicNumber should be manually set different, other than the last digit. The last digit changes for each timeframe. Different pairs can have the same magic number.

#### EXAMPLE:-

If you have E/U 1M , E/U 5M, G/U 1M and G/U 5M; you don't have to change the BaseMagicNumber. However, if you have 2 charts of E/U 5M, E/U 5M then you will need to change the BaseMagicNumber in either one of them.

- **TradeComment:** The comment of the order as shown at the Metatrader terminal.
- **ClassicSL:** True means a classic stop loss relative to opening price is used. All kind of stop loss and take profit is hidden from the broker.
- **HighLowSL:** True means the stop loss is relative to the highest or lowest of the past bars.
- **BarsBack:** Number of past bars taken into account to calculate the highest or lowest point.

- **MinimumSLPips:** If HighLowSL is selected, stop loss should be at least the defined pips.
- **StopLossPips:** Pips added to one of the above stop loss methods.
- **StopLossAtrMultiplier:** If greater than zero, the stop loss is ATR based. ATR is multiplied by this number.
- **StopLossAtrPeriod:** ATR period.
  - ✓ Only one kind of SL can be selected (Classic or HighLow), if by mistake both are selected then, ClassicSL is used.
  - ✓ MinimumSLPips is used only for HighLowSL setting. The number of bars to look for HighLow is defined by BarsBack Setting.

#### EXAMPLE #1:-

When ClassicSL is true, The StopLoss is based on the open price of the trade. Let's say the open price is 1.3962 then, If StopLossPips = 20, the SL would be 1.3942.

If StopLossAtrMultiplier is greater than zero, then this will be used. If the ATR setting gives a value of 30, then the SL would be 1.3932. If StopLossAtrMultiplier is zero, this setting is ignored.

#### EXAMPLE #2:-

When HighLowSL is true, The StopLoss is based on Highest or Lowest of the bars specified in BarsBack setting.

Let's say if the BarsBack = 3 and order is a long, then the lowest of the 3 bars is taken and added with StopLossPips or ATR based SL. If this is less than MinimumSLPips, then MinimumSLPips is used. Whichever is lower for long and higher for short is used.

- **VisibleSL:** Visible stop loss in pips, it is used in case of disconnection but visible to brokers.
 

This setting is used a failsafe SL (since all other SL settings are invisible to broker), This is set in the Server and visible to broker. This comes in handy when there is a disconnect or any kind of interruption where a connection is lost.
- **TakeProfitPips:** Pips of take profit.
- **TakeProfitAtrMultiplier:** If greater than zero, the take profit is ATR based. ATR is multiplied by this number.
- **TakeProfitAtrPeriod:** ATR period.
- **VisibleTP:** Visible take profit in pips, it is used in case of disconnection but visible to brokers.

Hopefully this is self explanatory. If TakeProfitAtrMultiplier is specified then the TP will be based on that, else the TakeProfitPips is used.

- **BreakEvenPips:** The stop loss moves to the opening price after price is in profit for the defined pips.
- **BreakEvenAtrMultiplier:** If greater than zero the break even is ATR based. ATR is multiplied by this number.
- **BreakEvenAtrPeriod:** ATR period.

Hopefully this is self explanatory. If BreakEvenAtrMultiplier is specified then the BE will be based on that, else the BreakEvenPips is used.

- **LockPips:** The stop loss moves to the opening price plus the defined pips after price reaches BreakEven level.
- **LockAtrMultiplier:** If greater than zero, the lock level is ATR based. ATR is multiplied by this number.
- **LockAtrPeriod:** ATR period.

#### EXAMPLE :-

Long Order is opened @ 1.3926, BE is 10 pips, LockPips is 5 pips, Price moves to 1.3936 thus activating the BE. Now if the price starts to come back, the order will be closed at as soon as price reaches 1.3931 (1.3926 + 5).

- **PSARTrailingStop:** The stop is activated if bid goes beyond the PSAR value of the previous closed candle.
- **ClassicTrailingStop:** Classic trailing stop is used.
- **TrailingStopPips:** Pips of trailing stop loss.
- **TrailingStopAtrMultiplier:** If greater than zero, the trailing stop is ATR based. ATR is multiplied by this number.
- **TrailingStopAtrPeriod:** ATR period.
- **TrailingStopStartPips:** Trailing stop is activated when price goes above or below the order opening price for the defined pips.
- **TrailingStepPips:** The trailing stop loss is modified in steps of price moves.
  - ✓ Trailing Stop can be based either on PSAR or Classic Trailing Stop or both.
  - ✓ The settings TrailingStopPips, TrailingStopAtrMultiplier, TrailingStopAtrPeriod, TrailingStopStartPips, TrailingStepPips all are used only if ClassicTrailingStop is selected.
  - ✓ PSARTrailingStop uses PSAR value to trail stops.
  - ✓ When ClassicTrailingStop is used, the Trailing Stop can be defined pips by TrailingStopPips or ATR based.
  - ✓ Trailing Stop can also be customized by setting TrailingStopStartPips and TrailingStepPips.
  - ✓ When TrailingStopStartPips is used, the trailing starts after price reaches a predefined number of pips specified by this settings.

- ✓ If we have a long order and ClassicTrailingStop is used and TrailingStopPips=10 and TrailingStepPips=3 and price is 10 pips above order opening price then the stop loss will not change if price goes in 11 pips profit but when it reaches 10+3 pips then stop loss will change to 10 pips below current price.
- **Slippage:** Max slippage of orders.
- **OppositeSignalExit:** The entire order (or any remaining partial lots) is closed when an Opposite Entry Signal (defined by the entry settings) occurs.
- **CloseIfProfit:** True means that if an opposite or exit signal occurs only profitable or breakeven trades are closed.
- **Hedge:** True means that a long and a short order can be simultaneously open.
- **ScreenShots:** Screenshots are saved in the files folder at the opening and closing of an order.
- **UseTradingHours:** Trading hours restrictions for opening new trades.
- **StartHour:** Trades are only opened after this hour. It is in hhmm format.
- **EndHour:** No trades are opened after this hour. It is in hhmm format.
- **NewsFilter:** No new trades are opened during news period.
- **MinutesBeforeNews:** The newsfilter is active for the defined minutes before news.
- **MinutesAfterNews:** The newsfilter is active for the defined minutes after news.
- **FridayClose:** True means that all open orders are closed and no new orders are opened after a specified hour of Friday. This is to avoid the weekend gap.
- **CloseHour:** Friday close hour in hhmm format.
- **Lots:** The lot size if money management is not used.
- **PartialClose1:** Percent of the initial lots that is closed when the first exit occurs.
- **PartialClose2:** Percent of the initial lots that is closed when the second exit occurs. An indicator based partial exit can happen only once, no matter which indicator caused it. An exit caused by SR or Psych level touch has no such limit.
- **BreakEvenPartialClose:** The stop loss is moved to breakeven at the defined exit stage. This doesn't interfere with the BreakEven function. This defines after how many partial exits the SL should be moved to Break Even.

#### EXAMPLE :-

If partial exits are used, it can be 3 stages, This setting will define whether the SL is moved to BE after 1<sup>st</sup> or 2<sup>nd</sup> Partial exit. This can have a value of 0 (not used), 1 or 2. When the partial lot is closed in favor of the trade, the SL is moved to BE for the remaining lots.

- **StartTrailingPartialClose:** Trailing stop is activated at the defined exit stage. PSARTrailingStop and/or ClassicTrailingStop should be set to true. This setting is similar to BreakEvenPartialClose, it gets activated based on the exit stage.
- **MinCloseDistance:** Subsequent exits caused by take profit or SR touch or Psych level touch should differ for at least the defined pips.
- **MoneyManagement:** True means that the lot size is defined by the money management.
- **LeveragePercent:** % of Equity Balance to Risk for each trade.
- **Martingale:** True means the lot size increases after the whole lots of a trade hit stop loss.
- **LotMultiplier:** The lot size is multiplied by this number.

- **MaxProgression:** Maximum times of lot increase after consecutive losing trades. Then the lot size will remain the same after each consecutive losing trade.

**The settings after this point is all related to the indicators used by EA. I have not covered them here, because it is assumed that you know the basics of THV Trading to set those values.**