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Three Point Trend Reversal

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Swing Trend Reversal (1-2-3)	H1 – H4	www.algobot.live

> ⚠ **Important Disclaimer** This document is for educational and informational purposes only. It does not constitute financial or investment advice. Trading forex, CFDs, and other leveraged instruments involves substantial risk of loss and is not suitable for all investors. Past backtest performance does not guarantee future results. Never trade with capital you cannot afford to lose.

Overview

Three Point Trend Reversal automates the classic 1-2-3 swing trend-change pattern — the setup popularised by Victor Sperandeo and Joe Ross — and runs it as a strict *reversal* system rather than a continuation one. Instead of chasing a move that is already underway, it waits for the market to carve out a recognisable turning-point structure and then trades the first confirmed break in the new direction.

The EA reduces raw price action to an alternating zig-zag of **fractal swing pivots** — each pivot being a bar whose high (or low) strictly beats its neighbours on both sides. Within that zig-zag it searches for the three-point reversal signature and enters only when a decisive close confirms that structure has flipped. Everything is derived from raw OHLC on the **primary chart timeframe**, with an ATR (Average True Range) filter used purely to keep the pattern meaningful and the risk structural.

- **Bullish 1-2-3 low** — a low (1), a reaction high (2), then a *higher* low (3). A close back above point 2 confirms the first higher-high and flips structure up → go long.
- **Bearish 1-2-3 high** — a high (1), a reaction low (2), then a *lower* high (3). A close back below point 2 confirms the first lower-low → go short.

> **Design intent — low drawdown.** The stop sits just beyond point 3, giving a tight, structural invalidation level. Once a trade travels +1R it is pulled to break-even, so most losers can only scratch. Each 1-2-3 pattern is armed exactly once and retired after entry until a fresh pivot forms — preventing revenge re-entries on the same level.

How It Works

1. Building market structure (fractal pivots)

On every newly-closed bar the EA re-evaluates the swing structure. A bar becomes a confirmed pivot only once it has `PivotLength` bars on *each* side that fail to exceed it:

- A **swing high** is a bar whose high strictly exceeds every high within `PivotLength` bars to the left and right.
- A **swing low** is a bar whose low strictly undercuts every low within `PivotLength` bars to the left and right.

Confirmed pivots are folded into a strictly **alternating zig-zag** (high, low, high, low…). If a new pivot is the same type as the last one, it simply *extends* the current swing when it is more extreme — the zig-zag always alternates direction, which is exactly what a clean 1-2-3 reading requires.

2. Recognising the 1-2-3 signature

The EA inspects the three most recent pivots (points 1, 2 and 3). For a valid setup:

- **Bullish:** point 3 must be a *higher* low than point 1 — the prior down-leg has been arrested and buyers are stepping in earlier.
- **Bearish:** point 3 must be a *lower* high than point 1 — the prior up-leg has failed to make a new high.
- The reaction leg from point 1 to point 2 must span at least `MinLegAtr` × ATR. This filters out micro-noise and demands a genuine swing.

3. Entry confirmation

A recognised pattern is not enough — the EA requires the market to *commit*. Point 2 is the trigger level, and entry only fires on a fresh, decisive close through it:

- **Fresh cross:** the previous bar must have closed on the pre-break side of point 2, and the current bar must close through it by at least `BreakoutAtrFraction` × ATR — no chasing an already-broken level.
- **Matching-colour bar:** the breakout bar must be bullish for a long (close > open) or bearish for a short.
- **Freshness window:** point 3 must have formed within the last `MaxConfirmBars` bars. A stale structure is discarded — the reversal must still be timely.

- **One-shot arming:** each point-2 level is traded once. After entry it is remembered until a new pivot forms, so the EA never re-enters the same pattern.

4. Stop loss and take profit

Risk is structural, not arbitrary. The initial stop is placed just beyond point 3 (and the breakout bar's own extreme), buffered by `StopAtrBuffer` × ATR:

- **Long:** stop = min(point 3, breakout-bar low) − `StopAtrBuffer` × ATR.
- **Short:** stop = max(point 3, breakout-bar high) + `StopAtrBuffer` × ATR.
- A minimum-risk floor applies: if the computed risk is smaller than 0.3 × ATR, the stop is widened to 0.5 × ATR to avoid an unrealistically tight stop.
- **Take profit** is a fixed multiple of the measured risk: TP = entry ± `RiskRewardRatio` × risk.

5. Break-even management

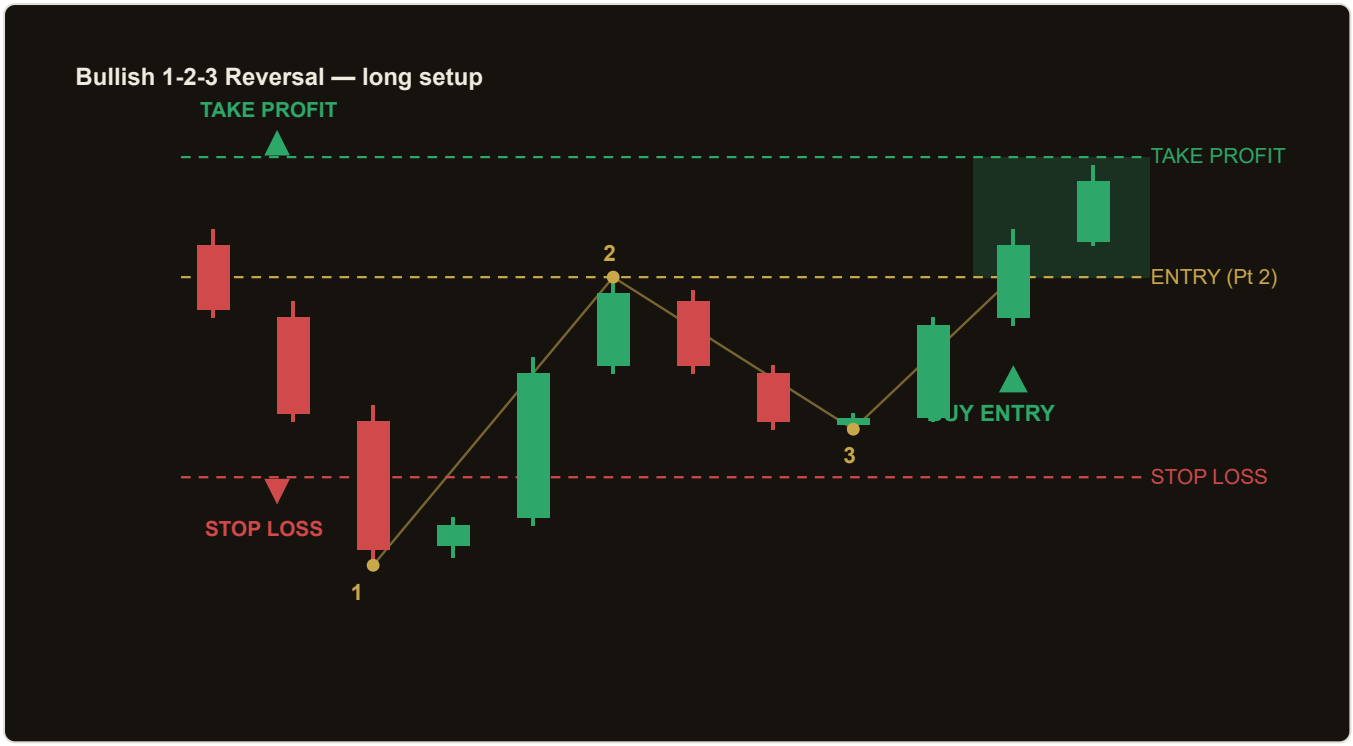
When `UseBreakeven` is enabled, the stop is pulled to the entry price as soon as price closes at +1R in the trade's favour (i.e. it has travelled a distance equal to the initial risk). From that point the trade can no longer become a full loser — it can only scratch or run to target.

6. Position & pattern management

The EA manages a single position per magic number. It acts once per fully-closed bar (the forming bar is ignored), so signals are stable and never repaint intrabar. After an entry the consumed trigger level is stored, and it is only cleared when a genuinely new pivot appears — this is the mechanism that prevents duplicate entries on the same swing.

Strategy in Action

The illustration below shows an example of how the strategy identifies a setup and triggers its entry and exit. This is a simplified, illustrative example for educational purposes — not real market data.



Illustrative example only. Actual market behaviour varies. Point 3 forms a higher low above point 1; the close above point 2 confirms the reversal and triggers the long, with the stop parked below point 3 and the target set by the risk-reward multiple.

Parameters

Parameter	Default	Description
PivotLength	`3`	Fractal pivot half-width — number of bars required on each side of a swing high/low for it to confirm. Higher = fewer, more significant pivots. Range 2–6.
AtrPeriod	`14`	Averaging period for the ATR used to scale the leg filter, breakout threshold and stop buffer. Range 5–40.
MinLegAtr	`1.0`	Minimum size of the reaction leg (point 1 → point 2), measured in ATRs. Filters out shallow, insignificant swings. Range 0.0–3.0.
BreakoutAtrFraction	`0.10`	How decisively the confirming bar must close beyond point 2, as a fraction of ATR. Larger values demand a stronger break. Range 0.0–1.0.
StopAtrBuffer	`0.50`	Extra distance beyond point 3 (in ATRs) where the initial stop is parked. Range 0.0–2.0.
RiskRewardRatio	`1.8`	Take-profit distance as a multiple of the measured risk (entry-to-stop). Range 1.0–4.0.
MaxConfirmBars	`15`	Maximum number of bars allowed since point 3 formed for the pattern to still be armed. Older setups are discarded as stale. Range 3–40.
UseBreakeven	`1`	When 1, the stop is pulled to break-even once the trade reaches +1R. Set 0 to disable. Range 0–1.
Lots	`0.10`	Fixed trade volume in lots. Range 0.01–1.0.
Magic	`3123`	Magic number identifying this EA's positions, so it manages only its own trades.

Recommended Settings

The defaults are tuned for liquid FX majors on the **H1 to H4** timeframes, where swing structure is clean and pivots are meaningful. The strategy is symbol-agnostic and derives everything from raw OHLC, so it adapts to any instrument that trends and reverses in recognisable swings.

Suggested starting point

- **Symbol / timeframe:**

  EURUSD, GBPUSD or XAUUSD on H1 or H4.

- **PivotLength = 3**

  for a balance of responsiveness and significance (raise to 4–5 on faster charts to suppress noise).

- **MinLegAtr = 1.0**

  and
  BreakoutAtrFraction = 0.10

  to require a genuine swing and a clean confirming break.

- **RiskRewardRatio = 1.8**

  with
  UseBreakeven = 1

  for the low-drawdown profile.

Tuning tips. To trade fewer but higher-quality reversals, increase `PivotLength` and `MinLegAtr`. To catch reversals earlier at the cost of more signals, lower `BreakoutAtrFraction` and `MinLegAtr`. Widening `StopAtrBuffer` gives the structure more room but increases per-trade risk; raising `RiskRewardRatio` improves the payoff but lowers the hit rate. Always re-optimise on a demo account before going live.

⚠ **Volatility note.** Because stops are structural (anchored to point 3), a wide ATR or a distant point 3 can produce a large stop distance. Confirm that the resulting per-trade risk and the fixed `Lots` size are appropriate for your account before trading live.

How to Install on MetaTrader 5

1. Copy `ThreePointTrendReversal.ex5` to your MT5 `MQL5\Experts\` folder
2. Restart MetaTrader 5 and refresh the Navigator panel
3. Drag the EA onto a chart matching the recommended symbol and timeframe
4. Configure the input parameters and click **OK**
5. Enable **Algo Trading** in the MT5 toolbar

Risk Warning

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