

Triple Pivot Reversal

Expert Advisor Documentation

PLATFORM

MetaTrader 5 (MT5)

TYPE

Price-Action Swing Reversal

TIMEFRAME

H1 / M30 (adaptable)

WEBSITE

www.algobot.live

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Overview

Triple Pivot Reversal is a pure price-action Expert Advisor that mechanises the classic “1-2-3” **swing reversal** — one of the most widely taught discretionary chart patterns — into a fully automated, rule-based system. It uses no oscillators, no moving-average crossovers, and no volume: every decision is derived from the raw geometry of swing highs and swing lows.

The pattern describes how one directional swing hands off to the next. A market that has been falling carves out a **low (point 1)**, rallies to a **high (point 2)**, then pulls back to a **higher low (point 3)** that refuses to break the old bottom. When price finally trades back through point 2, the down-swing is broken and a fresh up-swing is confirmed. The mirror image — a High-Low-Lower-High sequence — marks a top.

Swing points are located with **symmetric fractal pivots**: a bar whose high (or low) is the strict local extreme of **PivotStrength** bars on each side. Only the last three *alternating* pivots are ever considered, so the engine always evaluates a genuine Low-High-Low or High-Low-High sequence. A set of quality gates ensures that only well-formed, meaningful patterns are traded, and a structural stop placed just past point 3 keeps the risk on each trade tight and clearly defined.

Design philosophy — structural, low-drawdown risk. The stop-loss lives just beyond point 3, a level the pattern says price should *not* revisit. That is a tight, structurally meaningful invalidation rather than an arbitrary distance. Any setup whose point-3 stop would be wider than $\text{MaxStopAtr} \times \text{ATR}$ is simply skipped, and once a trade reaches **+1R** it is moved to break-even and then trailed by $\text{AtrTrailMult} \times \text{ATR}$ on every tick — so open profit is protected continuously and adverse excursions are capped near scratch.

How It Works

1. Locating the swing pivots

On each newly-closed bar the EA confirms whether the bar sitting PivotStrength bars back has become a completed fractal pivot. A pivot is a **swing high** when its high is strictly greater than the highs of the PivotStrength bars on both sides, and a **swing low** when its low is strictly less than the lows on both sides. Ambiguous outside bars (both or neither) are discarded.

Confirmed pivots are stored in a strictly **alternating** list (Low, High, Low, ...). If a new pivot repeats the type of the previous one, only the more extreme of the two is kept — a higher high replaces the prior high, a lower low replaces the prior low. This guarantees the three pivots examined for a pattern are always a real turning-point sequence.

2. Recognising a valid 1-2-3

The three most recent alternating pivots (P1, P2, P3) are tested against the pattern rules:

- **Bullish setup** — Low (P1) → High (P2) → Low (P3), where *P3's low is higher than P1's low* (a higher low). The breakout level is P2; the structural stop anchor is P3.
- **Bearish setup** — High (P1) → Low (P2) → High (P3), where *P3's high is lower than P1's high* (a lower high). The breakout level is P2; the stop anchor is P3.

3. Quality gates

A recognised shape is only *armed* if it also passes three robustness filters, which together favour fewer but cleaner trades:

- **Impulse-leg size** — the P1→P2 leg must be at least $\text{MinLegAtr} \times \text{ATR}$, ensuring a genuine swing rather than micro-noise.
- **Healthy retracement** — the point-3 pullback must retrace between MinRetrace and MaxRetrace of the leg. Too shallow is a non-event; too deep is effectively a full round-trip.
- **Pattern integrity** — the setup is voided the instant price pierces beyond point 3 before the breakout fires (the higher-low / lower-high has failed).

4. Entry trigger

Once armed, the EA watches each completed bar. A long fires when the bar **closes above the point-2 breakout level**; a short fires when a bar **closes below point 2**. Each armed pattern is a single-shot trigger, and only one position is held at a time. Longs enter at the ask, shorts at the bid.

5. Stop-loss, take-profit and trade management

- **Stop-loss** — placed just past point 3 with an extra $\text{SLAtrBuffer} \times \text{ATR}$ cushion (below P3 for longs, above P3 for shorts). If the resulting risk exceeds $\text{MaxStopAtr} \times \text{ATR}$, the trade is skipped entirely.
- **Take-profit** — set at $\text{RiskReward} \times \text{risk}$ from entry, giving a fixed reward-to-risk ratio.
- **Break-even & trailing** — evaluated on *every tick*. Once price advances by +1R, the stop is pulled to break-even (or better) and then trailed by $\text{AtrTrailMult} \times \text{ATR}$, locking in open profit continuously.

Single timeframe. Every price query uses the chart's primary timeframe, so the strategy runs entirely on whatever timeframe you attach it to — no multi-timeframe data is required.

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. It depicts a **bullish 1-2-3**: a swing low (P1), a rally to a swing high (P2), a pullback to a *higher* low (P3), and the long entry that fires when price closes back above P2.



Illustrative example only. Actual market behaviour varies.

Parameters

All inputs below are exposed on the EA's *Inputs* tab. Defaults are shown; each numeric parameter can be swept between its listed minimum and maximum during optimisation.

Parameter	Default	Description
PivotStrength	3	Fractal pivot half-width — the number of bars required on each side of a swing extreme for it to count as a pivot. Higher values yield fewer, more significant swings. Range 2–8.
MinLegAtr	1.0	Minimum size of the impulse leg P1→P2, expressed in ATR units. Filters out micro-swings. Range 0.3–5.0.
MinRetrace	0.30	The point-3 pullback must retrace at least this fraction of the P1→P2 leg. Range 0.10–0.50.
MaxRetrace	0.85	...and at most this fraction, keeping the shape a valid 1-2-3 rather than a full reversal. Range 0.50–1.00.
AtrPeriod	14	ATR averaging length used for the stop, target, trailing and gate distances. Range 7–30.
SIATRBuffer	0.25	Extra ATR cushion placed beyond point 3 for the structural stop. Range 0.0–1.5.
RiskReward	2.0	Take-profit distance as a multiple of the structural risk (the reward-to-risk ratio, RR). Range 1.0–5.0.
MaxStopAtr	3.0	Skip any signal whose point-3 stop would be wider than this many ATRs (per-trade risk cap). Range 1.0–8.0.
AtrTrailMult	1.5	Trailing distance (in ATR) applied once a trade is past +1R. Range 0.5–4.0.
Lots	0.10	Fixed order volume in lots. Range 0.01–1.0.
Magic	4231	Magic number identifying this EA's positions, so trade management only touches its own orders.

Recommended Settings

The strategy is timeframe-agnostic, but its swing-based logic tends to be most reliable on intermediate timeframes where fractal pivots represent meaningful structure rather than intrabar noise.

- **Symbols:** Liquid FX majors (e.g. EUR/USD, GBP/USD, USD/JPY) and major indices with clean, trending-then-pausing behaviour.

- **Timeframe:** H1 or M30 as a starting point. Lower timeframes generate more signals but noisier pivots; higher timeframes generate fewer, higher-conviction setups.
- **Pivot strength:** Keep `PivotStrength` at 3–4 for H1/M30. Increase it if you want only major swings.
- **Retracement window:** The default 0.30–0.85 band captures most healthy 1-2-3s; tighten toward 0.38–0.62 for more “textbook” pullbacks.

Example — a conservative H1 configuration

`PivotStrength = 4` , `MinLegAtr = 1.2` , `MinRetrace = 0.38` , `MaxRetrace = 0.70` , `AtrPeriod = 14` , `RiskReward = 2.0` , `MaxStopAtr = 2.5` , `AtrTrailMult = 1.5` . This produces fewer, well-defined swings with a tight structural stop and a 2:1 reward-to-risk target.

Always validate before going live. Backtest on quality tick data across several years and multiple market regimes, then forward-test on a demo account. Optimise the ATR gates and retracement band per symbol rather than assuming the defaults are optimal everywhere.

How to Install on MetaTrader 5

- 1 Copy `TriplePivotReversal.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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