

SwingFailureReversal

Expert Advisor Documentation & Strategy Guide

PLATFORM

MetaTrader 5 (MT5)

TYPE

Reversal — Swing Failure Pattern

TIMEFRAME

M15 – M30

WEBSITE

www.algotbot.live

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Overview

SwingFailureReversal is a pure price-action Expert Advisor that uses **no indicators of any kind** — no moving averages, ATR, RSI, or oscillators. It reads raw candles and real horizontal market structure, then trades the classic *swing failure pattern* (also known as a liquidity sweep or stop-hunt rejection) against the most recent support and resistance levels.

The only “levels” it recognises are genuine swing pivots: a **swing high** (resistance) is a bar whose high is strictly the highest over a number of bars on each side, and a **swing low** (support) is a bar whose low is strictly the lowest over that same window. When price pokes through one of these levels to grab the stops resting beyond it, but the candle closes back inside leaving a dominant rejection wick, the EA fades the move — betting the level held.

Because stops and targets are derived entirely from candle structure (expressed as a fraction of the signal bar’s own range), the strategy **auto-scales to any symbol or timeframe** without needing point size or pip configuration. It is best suited to liquid instruments that produce clean stop-runs — for example XAUUSD or GBPUSD — on the M15 / M30 timeframes, traded as a counter-trend reversal style.

How It Works

Market Structure Detection

On every newly-closed bar the EA scans backward for the most recent **confirmed** swing pivot. A pivot at a given bar requires `PivotLeftRight` bars on each side, and the centre bar must be the strict extreme of that window:

- **Swing high (resistance):** the centre bar's high is strictly greater than every high `PivotLeftRight` bars to its left and right.
- **Swing low (support):** the centre bar's low is strictly lower than every low `PivotLeftRight` bars to each side.

Only fully-formed pivots count — the scan starts at the most recent bar that already has the required confirmation bars on its right, so a level is never used before structure has confirmed it.

Entry Logic

The strategy acts **once per closed bar** and evaluates the just-closed candle (the "signal bar") against the nearest pivot:

- **SHORT (sell):** price pokes *above* the most recent swing-high resistance (`High > level`) but the bar *closes back below* it (`Close < level`), and the upper rejection wick is at least `MinWickFrac` of the bar's full range. Resistance held → sell the failure.
- **LONG (buy):** price pokes *below* the most recent swing-low support (`Low < level`) but the bar *closes back above* it (`Close > level`), and the lower rejection wick is at least `MinWickFrac` of the bar's range. Support held → buy the failure.

Note: The wick filter is the heart of the edge. A genuine swing failure leaves a long rejection wick (a "pin") where price was rejected. `MinWickFrac` demands that this wick beyond the body is a dominant fraction of the candle's range, screening out marginal pokes that merely brush the level.

Stop Loss & Take Profit

Both exits are structural and attached to the order at entry — the EA does not manage trades tick-by-tick. Only one position per magic number is allowed at a time; the stop and target run the trade to completion.

- **Stop loss** is placed just beyond the sweep extreme: for a short, $SL = signalHigh + StopBufferFrac \times range$; for a long, $SL = signalLow - StopBufferFrac \times range$. The buffer is a fraction of the signal bar's range, so it scales with volatility.
- **Take profit** is a fixed reward-to-risk multiple of that structural stop distance: $TP = entry \pm RewardRatio \times risk$, where `risk` is the distance from entry to the stop.

Worked example (short)

Suppose a signal bar on XAUUSD has High = 2410.0, Low = 2402.0 (range = 8.0) and closes at 2405.0, just below a swing-high resistance at 2408.0. With `StopBufferFrac = 0.15` the stop sits at $2410.0 + 0.15 \times 8.0 = 2411.2$. If the bid entry is 2405.0, the risk is 6.2. With `RewardRatio = 2.00` the take profit is $2405.0 - 2 \times 6.2 =$

2392.6

— a 2:1 reward-to-risk target measured purely from candle structure.

Trade Management

Once an order is sent, no further action is taken on that position: the broker-side stop and target close it. A new signal can only fire after the current position has closed, keeping the EA to a single open trade per symbol and magic number.

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 **short** swing-failure: price sweeps above a swing-high resistance, closes back below with a long upper rejection wick, and the EA sells the failure.



Illustrative example only. Actual market behaviour varies.

Parameters

Parameter	Default	Description
PivotLeftRight	3	Number of bars required on each side of a candle for it to qualify as a swing pivot (high or low). Higher values demand more significant, less frequent structure. Range 2–8, step 1.
MinWickFrac	0.40	Minimum rejection-wick size beyond the body, as a fraction of the signal bar's full range. Filters marginal pokes and demands a genuine pin/rejection. Range 0.10–0.70, step 0.05.
StopBufferFrac	0.15	Extra stop-loss buffer placed beyond the sweep extreme, expressed as a fraction of the signal bar's range. Range 0.00–1.00, step 0.05.
RewardRatio	2.00	Take-profit distance as a multiple of the structural stop distance (reward-to-risk). 2.00 = a 2:1 target. Range 1.00–5.00, step 0.50.
Lots	0.10	Fixed order volume in lots for each trade. Range 0.01–1.00, step 0.05.
Magic	6301	Unique magic number identifying this EA's orders, so it manages only its own positions. Range 0–9,999,999, step 1.

Recommended Settings

The strategy is designed for liquid instruments that regularly run stops beyond obvious levels, where swing-failure rejections are most reliable.

- **Symbols:** XAUUSD (Gold) or GBPUSD — high-liquidity instruments with clean stop-runs.
- **Timeframe:** M15 or M30 for a balance of signal frequency and structure quality.
- **PivotLeftRight:** keep at 3 for responsive structure; raise to 4–5 to trade only stronger, more established levels.
- **MinWickFrac:** 0.40 is a solid default; raise toward 0.50–0.60 to demand more decisive rejections (fewer, higher-quality signals).
- **RewardRatio:** 2.00 suits a counter-trend reversal style; lower toward 1.5 for a higher hit-rate, raise toward 3.0 for larger but less frequent winners.
- **Lots:** size to your account so the per-trade risk (entry-to-stop distance × volume) stays within a small fraction of equity.

Tip: Because the stop distance is structural — tied to the signal bar's range — per-trade risk in account currency varies with volatility. Confirm your effective risk per trade on the target symbol before increasing **Lots**.

How to Install on MetaTrader 5

- 1 Copy `SwingFailureReversal.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 (e.g. XAUUSD M15)
- 4 Configure the input parameters and click **OK**
- 5 Enable **Algo Trading** in the MT5 toolbar

Risk Warning

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