

Swing Pivot Pin Reversal

Expert Advisor Documentation

PLATFORM

MetaTrader 5 (MT5)

TYPE

Price-Action Reversal

TIMEFRAME

H1 – H4 (any)

WEBSITE

www.algotbot.live

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Overview

Swing Pivot Pin Reversal is a pure price-action Expert Advisor that trades reversals at structurally significant levels. It fuses two classic concepts into a single, strict entry filter:

- **Support & Resistance from fractal swing pivots.** A swing high (resistance) is a closed bar whose high is strictly above the highs of the **K** bars on either side of it; a swing low (support) is the mirror. The EA always keeps the most-recently-confirmed swing high and swing low as its active decision levels.
- **A pin-bar rejection candle.** A pin bar is a candle with a dominant rejection wick, a small body, and a close pushed into the far end of its range — the footprint of a failed move and a sharp snap-back.

A trade triggers only when a pin bar *sweeps through* an active level (running the resting liquidity beyond it) and then *closes back inside*, signalling that the breakout has been rejected. Stops are anchored beyond the rejection wick with an ATR buffer, and targets are placed at a configurable ATR multiple. Because every bar is read through the chart's primary timeframe, the EA runs on whatever timeframe you attach it to.

Core idea. The strategy does not buy support or sell resistance blindly. It waits for price to *poke beyond* the level and get rejected within a single candle — a stop-run followed by an immediate reclaim. This is what separates a genuine reversal from a slow grind through the level.

How It Works

1. Building the levels (fractal swing pivots)

On every completed bar the EA re-evaluates the newest pivot that can be confirmed, which requires `K` closed bars on each side (`K = PivotLookback`). When that pivot is a fractal swing high it becomes the active **resistance**; when it is a fractal swing low it becomes the active **support**. Levels persist across bars and keep updating even while a trade is open.

2. Detecting the pin bar (the signal candle)

The signal is always the latest closed bar. The EA measures the candle's geometry relative to its full range (`High - Low`):

- **Small body** — `body / range ≤ BodyMaxRatio` .
- **Dominant wick** — the rejection wick must be at least `WickRatio` of the range (lower wick for longs, upper wick for shorts).
- **Close placement** — the close sits in the favourable end of the range (`closePos ≥ 0.55` for a bullish pin, `≤ 0.45` for a bearish pin).

3. Entry logic

LONG — BULLISH PIN RECLAIMING SUPPORT

- The signal bar's low dips to or below active support (`Low ≤ support`) — a stop-run on resting liquidity.
- Yet the bar **closes back above** support (`Close > support`).
- The candle is a bullish pin bar (dominant lower wick, small body, close in the upper part of the range).
- Entry is taken at the **Ask**. The rejection of lower prices is read as a buy signal.

SHORT — BEARISH PIN RECLAIMING RESISTANCE

- The signal bar's high reaches or exceeds active resistance (`High ≥ resistance`) — a sweep above the level.
- Yet the bar **closes back below** resistance (`Close < resistance`).
- The candle is a bearish pin bar (dominant upper wick, small body, close in the lower part of the range).
- Entry is taken at the **Bid**.

4. Stop loss & take profit

Stops are anchored to structure — just beyond the rejection wick — with an ATR-scaled buffer, while targets are a straight ATR multiple:

```

ATR          = Indicators.Atr(High, Low, Close, AtrPeriod) // at the signal bar

LONG  SL  = signalBar.Low  - SLatrBuffer × ATR
      TP  = entry          + TpAtrMult  × ATR

SHORT SL  = signalBar.High + SLatrBuffer × ATR
      TP  = entry          - TpAtrMult  × ATR

```

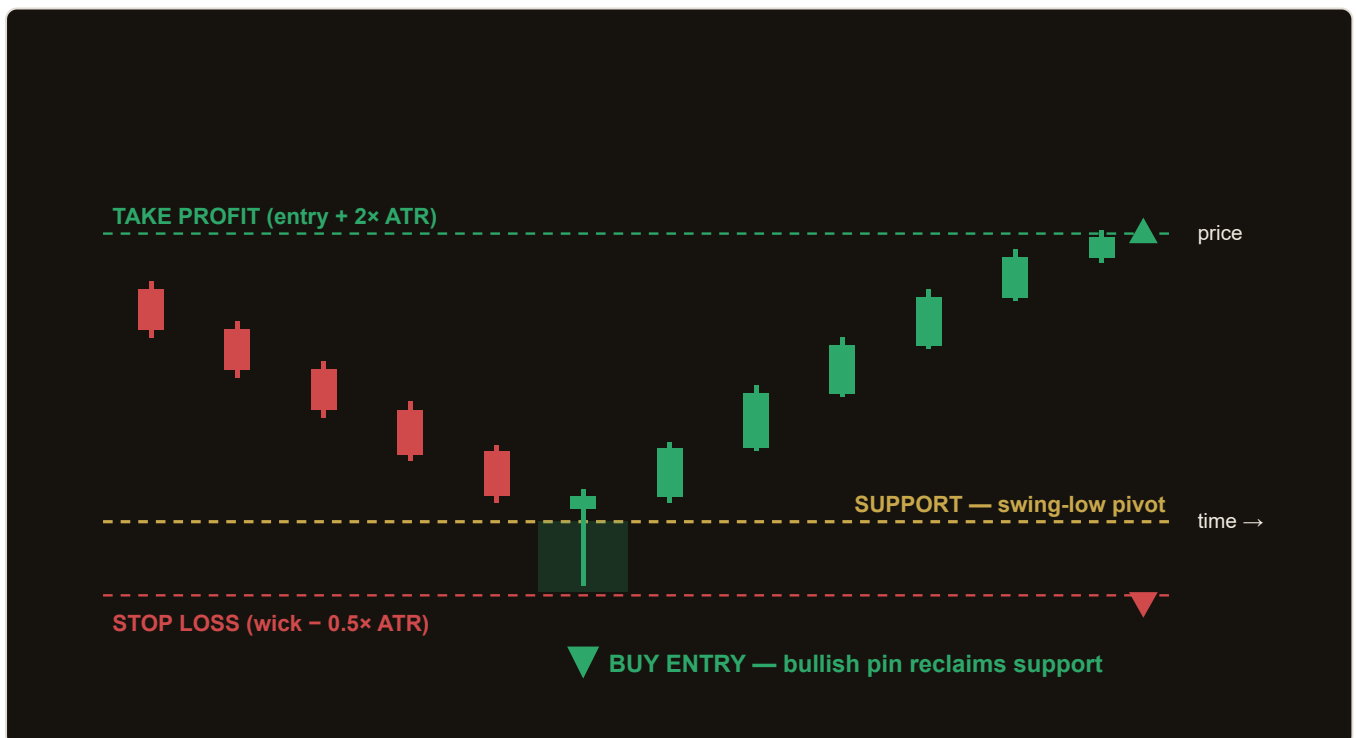
An order is only submitted if the stop sits on the correct side of entry (below entry for longs, above for shorts), guarding against degenerate fills.

5. Trade & execution management

- **One bar, one decision.** New-bar detection ensures the logic runs exactly once per completed candle.
- **One position per symbol/magic.** While a trade with the EA's magic number is open, no new entry is taken (levels still update in the background).
- **Magic number.** All orders are tagged with `Magic = 7411` and the comment `SwingPivotPinReversal`, so the EA only ever manages its own trades.

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.

Parameters

Parameter	Default	Description
PivotLookback	3	Number of bars (K) required on each side of a fractal swing pivot. Larger values demand more prominent, less frequent pivots. Range 2–6, step 1.
WickRatio	0.55	Minimum dominant-wick size as a fraction of the candle range. Higher values require a more pronounced rejection. Range 0.40–0.75, step 0.05.
BodyMaxRatio	0.40	Maximum body size as a fraction of the candle range — enforces a small "pin" body. Lower values are stricter. Range 0.20–0.60, step 0.05.
AtrPeriod	14	Averaging period for the ATR used to size the stop buffer and the target. Range 7–28, step 1.
SlAtrBuffer	0.50	Extra distance placed beyond the rejection wick for the stop loss, expressed in ATRs. Range 0.10–1.50, step 0.10.
TpAtrMult	2.00	Take-profit distance from entry, expressed as a multiple of ATR. Range 1.00–5.00, step 0.50.
Lots	0.10	Fixed trade volume in lots. Range 0.01–1.00, step 0.05.
Magic	7411	Magic number identifying this EA's positions, so it only manages its own trades.

Recommended Settings

Pin-bar reversals at structure read best on higher timeframes, where each candle carries more weight and wicks reflect genuine rejection rather than noise.

- **Timeframe:** H1 to H4 are the natural home for this style. Avoid very low timeframes where pin bars form constantly and carry little information.
- **Instruments:** liquid majors and well-traded indices/metals that respect swing structure and produce clean rejection wicks.
- **Pivot sensitivity:** `PivotLookback = 3` is a balanced default. Increase it to trade only the most significant swing levels; decrease it for more frequent, lower-conviction signals.
- **Risk-to-reward:** the default `TpAtrMult = 2.00` with `SlAtrBuffer = 0.50` aims for a roughly 2R target. Widen `SlAtrBuffer` if you find stops being clipped by spread or wick noise.

Example configuration — EURUSD H1

PivotLookback = 3 | WickRatio = 0.55 | BodyMaxRatio = 0.40 | AtrPeriod = 14 |
SlAtrBuffer = 0.50 | TpAtrMult = 2.00 | Lots = 0.10 A conservative starting point: only well-formed pin bars (small body, dominant wick) that sweep and reclaim a confirmed swing level will trigger a trade.

Tip. Always validate any parameter set with the MT5 Strategy Tester on your chosen symbol and timeframe before trading it live. Because stops and targets scale with ATR, the same settings adapt automatically to different volatility regimes — but position sizing should still be reviewed for each instrument.

How to Install on MetaTrader 5

- 1 Copy `SwingPivotPinReversal.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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