

# Pivot Momentum Breakout

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Pivot Breakout (Momentum)	M15 – H1	<a href="http://www.algotbot.live">www.algotbot.live</a>

**⚠ 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

**Pivot Momentum Breakout** is a breakout-runner Expert Advisor that fuses two classic ideas into one disciplined rule set: the objective support/resistance ladder of **floor-trader pivot points**, and a **momentum confirmation** drawn from the Relative Strength Index (RSI).

A raw break of a pivot level is a famously noisy signal — most pokes through the first resistance (R1) or first support (S1) fail and snap back. Pivot Momentum Breakout only acts on a break that real momentum is actually driving, then runs the trade *structurally* from the broken level to the next pivot, with an ATR-buffered stop sitting on the level that just flipped from resistance to support (or vice versa).

The pivot ladder is rebuilt every bar from a rolling window of the **primary timeframe only** — no higher timeframe is read — using the window that *ends on the bar before* the breakout bar, so each break is measured against levels that were already fixed and cannot repaint. Only two indicators are used: **RSI** (the momentum gate) and **ATR** (volatility-based stop sizing). Everything is sized off ATR so the EA adapts naturally across symbols and volatility regimes.

**In one sentence:** Take a pivot break only when momentum confirms it, target the next pivot, and stop just beyond the level that broke — never chase an exhausted move.

# How It Works

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## 1. Building the Pivot Ladder

On each newly-closed bar, the EA scans a rolling window of `SessionBars` bars that ends one bar *before* the candidate breakout bar. From the window's high (H), low (L) and closing price (C) it derives the standard pivot ladder:

$$\begin{aligned} P &= (H + L + C) / 3 && \text{(central pivot)} \\ R1 &= 2P - L && S1 = 2P - H \\ R2 &= P + (H - L) && S2 = P - (H - L) \end{aligned}$$

Because the window stops before the breakout bar, the levels are fixed in advance — the break is judged against pre-existing structure, never against a level that moved to fit the price.

## 2. The Momentum Gate (RSI)

A break is only valid when RSI confirms genuine, fresh momentum that is *not yet exhausted*. For a long break the EA requires RSI to be:

- **Above** `RsiBull` — momentum is present;
- **Still rising** (RSI now > RSI one bar earlier) — momentum is accelerating, not fading;
- **Below** `RsiOverbought` — the move is not already stretched, since an exhausted break tends to snap back.

Short breaks use the exact mirror thresholds: RSI must be below `100 - RsiBull`, still falling, and above `100 - RsiOverbought`.

## 3. Entry Logic

### LONG ENTRY

- The just-closed bar is the **first to close above R1** (the prior close was at or below R1);
- The breakout bar is **bullish** (close > open);
- The RSI momentum gate is satisfied (above `RsiBull`, rising, below `RsiOverbought`).

Entry is placed at the current **Ask**.

### SHORT ENTRY

- The just-closed bar is the **first to close below S1** (the prior close was at or above S1);
- The breakout bar is **bearish** (close < open);
- RSI is below `100 - RsiBull`, falling, and above `100 - RsiOverbought`.

Entry is placed at the current **Bid**.

#### 4. Exit — Stop Loss & Take Profit

The trade is managed entirely by a structural target and stop set at entry — there is no trailing or time stop.

- **Take Profit (long):** the next pivot up, **R2**. **(short):** the next pivot down, **S2**.
- **Stop Loss (long):**  $R1 - (\text{StopBufferAtr} \times \text{ATR})$  — the broken resistance, now acting as support, buffered by ATR. **(short):**  $S1 + (\text{StopBufferAtr} \times \text{ATR})$ .

#### 5. Quality Filters

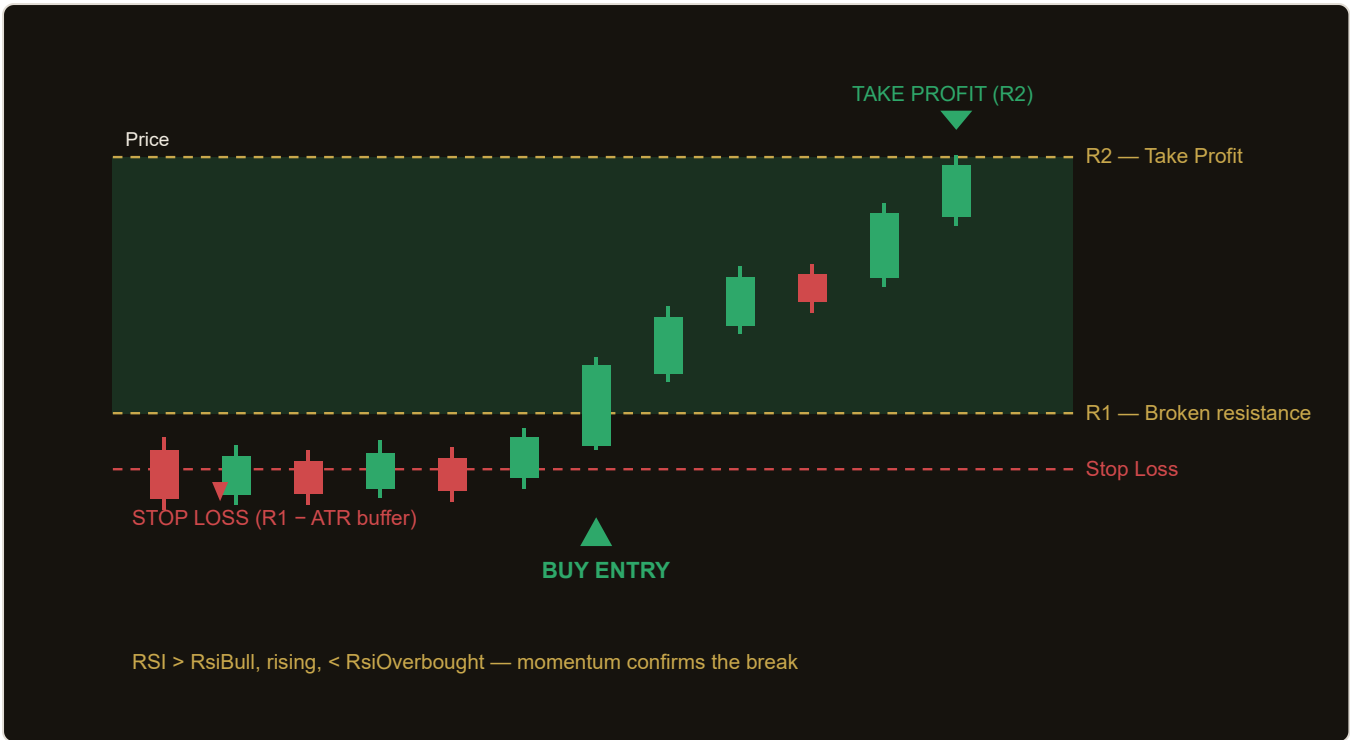
- **Reward:Risk filter** — the trade is rejected unless the next-pivot target is far enough away to justify the structural stop:  $\text{reward} / \text{risk} \geq \text{MinRewardRisk}$ .
- **Spread cap** — entries are skipped whenever the current spread exceeds **MaxSpreadPoints**, blocking trades in poor conditions.
- **One position per magic** — only a single open position is held at a time; the target and stop manage the exit.

**Why pivots flip:** Once price decisively breaks and closes above R1, that level often becomes a floor on any pullback. Placing the stop just below it (buffered by ATR) keeps risk anchored to real structure rather than an arbitrary distance.

## Strategy in Action

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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

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Parameter	Default	Description
SessionBars	96	Rolling lookback, in bars, used to build the pivot ladder each bar. Range 20–240, step 4.
RsiPeriod	14	RSI period for the momentum gate. Range 7–28, step 1.
RsiBull	55.0	RSI must be above this for a long break (mirror <code>100 - x</code> for shorts) — momentum is present. Range 50–70, step 1.
RsiOverbought	75.0	RSI must be below this for a long break (mirror <code>100 - x</code> for shorts) — the move is not yet exhausted. Range 65–90, step 1.
AtrPeriod	14	ATR period used for stop sizing. Range 7–28, step 1.
StopBufferAtr	0.50	Stop buffer beyond the broken pivot, as a multiple of ATR. Range 0.10–2.00, step 0.10.
MinRewardRisk	1.20	Minimum acceptable reward:risk (next-pivot distance ÷ stop distance). Range 0.50–3.00, step 0.10.
MaxSpreadPoints	80	Skip entries when the current spread (points) is wider than this. Range 5–300, step 5.
Lots	0.10	Position size in lots. Range 0.01–1.00, step 0.05.
Magic	7733	Magic number identifying this EA's positions. Range 0–9,999,999, step 1.

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## Recommended Settings

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The defaults are tuned for a liquid FX major or a major stock index on the **M15–H1** timeframes, where pivot structure is most respected and momentum follow-through is cleanest.

### Symbol & Timeframe

- **Symbols:** a liquid FX major (e.g. EURUSD, GBPUSD) or a major index CFD.
- **Timeframe:** M15 to H1. Higher timeframes give fewer but cleaner breaks; lower timeframes generate more signals and more noise.

## Tuning Notes

- **SessionBars** sets how much history defines the pivot range. Smaller windows react faster to recent structure; larger windows produce wider, more significant levels.
- **RsiBull / RsiOverbought** control how strict the momentum gate is. Widening the band (lower `RsiBull`, higher `RsiOverbought`) admits more breaks; tightening it keeps only the strongest, freshest momentum.
- **StopBufferAtr** trades stop survivability against risk per trade — a larger buffer reduces premature stop-outs but widens the stop and lowers reward:risk.
- **MinRewardRisk** is the structural quality filter. Raising it rejects more marginal setups where the next pivot is too close to justify the stop.

### Example: tightening for cleaner signals

Raise `RsiBull` to 60 and lower `RsiOverbought` to 70 to demand stronger-yet-unexhausted momentum, and raise `MinRewardRisk` to 1.5 so only breaks with a clearly worthwhile next-pivot target are taken. Expect fewer trades with a higher average quality.

**Always validate first.** Backtest on quality tick data and run on a demo account before going live. Pivot behaviour and spread conditions differ between brokers and symbols — confirm the defaults suit your instrument before risking capital.

## How to Install on MetaTrader 5

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- 1 Copy `PivotMomentumBreakout.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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