

Rsi Swing Breakout

Expert Advisor Documentation

PLATFORM

MetaTrader 5 (MT5)

TYPE

Momentum Breakout / Trend Continuation

TIMEFRAME

M15 – H1

WEBSITE

www.algotbot.live

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Overview

Rsi Swing Breakout is a momentum-filtered, structure-confirmed breakout Expert Advisor that trades *with* the prevailing move — a trend-continuation style rather than a counter-trend one. It combines just two ingredients that play deliberately different roles: the **Relative Strength Index (RSI)** as a momentum-regime gauge, and **swing-pivot price structure** as the actual breakout trigger.

Crucially, RSI is **not** used here to fade exhaustion at the classic 30/70 levels. Instead, its position relative to the 50 midline tells the EA which side currently owns the order flow. Trades are only taken in that direction, and only when price genuinely breaks through a level the market itself recently defended. Because the entire system is built on price structure (swing highs/lows and bar ranges), RSI remains the *only* indicator in the whole strategy, and risk is fully structural — no ATR, points, or pip arithmetic — so it adapts to any symbol or timeframe.

Core idea. Two orthogonal filters working together: RSI screens for a market that is *already* directional, and the swing break demands that price actually commit through prior structure before any risk is taken. Together they skip the range-bound fake-outs where lone breakout entries get chopped up.

How It Works

1. Momentum regime (RSI vs the 50 midline)

On every newly-closed bar the EA reads the RSI of the just-closed signal bar and compares it to 50, offset by the `MomentumMargin` input:

- **Bullish regime** — $RSI \geq 50 + \text{MomentumMargin}$: buyers are in control, so only long breakouts are considered.
- **Bearish regime** — $RSI \leq 50 - \text{MomentumMargin}$: sellers are in control, so only short breakouts are considered.
- **No-edge zone** — RSI sitting in the band around 50: no trade. This single filter is what keeps the EA out of the choppy, edgeless breakouts that fail inside a range.

2. Structure (swing pivots — pure price action)

A confirmed **swing high** is a bar whose high strictly tops the `SwingHalfWidth` bars on *both* sides; a **swing low** is the mirror. These fractal pivots are the levels the market actually defended, and the EA tracks the most recent confirmed swing high and swing low as the live resistance and support. A pivot can only be confirmed once it has a full window of bars on its right side, so the EA confirms exactly one new candidate pivot — the bar `SwingHalfWidth` back from the newest close — each time a bar closes.

3. The entry — a true break of structure

A **long** fires only when the momentum regime is bullish *and* the freshly-closed bar closes *above* the last confirmed swing high while the bar before it was still at or below that level. Requiring the prior bar to be on the other side of the level makes this a genuine cross — a real break of structure — rather than a late chase of a level price left behind long ago. The **short** rule is the exact mirror: a bearish regime plus a clean close below the last confirmed swing low, with the prior bar still at or above it.

Long entry conditions (all must hold)

- RSI of the closed signal bar $\geq 50 + \text{MomentumMargin}$ (bullish regime)
- Signal bar close $>$ last confirmed swing high
- Prior bar close \leq that same swing high (the cross is fresh)
- No open position for this magic number, and current spread $\leq \text{MaxSpreadPoints}$

4. Structural risk — stop loss and take profit

Risk is structural and self-scaling. For a long, the stop sits just *under* the most recent confirmed swing low, buffered by `StopBufferFrac` of the breakout bar's range — if price falls back beneath the higher low that defined the up-leg, the continuation thesis is void. The take-profit is placed at a fixed `RewardRatio` multiple

of that structural stop distance. For a short, the stop sits just above the most recent swing high and the target is the mirror image.

```
// LONG
entry = Ask
sl    = swingLow - StopBufferFrac * (sigHigh - sigLow)
risk  = entry - sl
tp    = entry + RewardRatio * risk

// SHORT
entry = Bid
sl    = swingHigh + StopBufferFrac * (sigHigh - sigLow)
risk  = sl - entry
tp    = entry - RewardRatio * risk
```

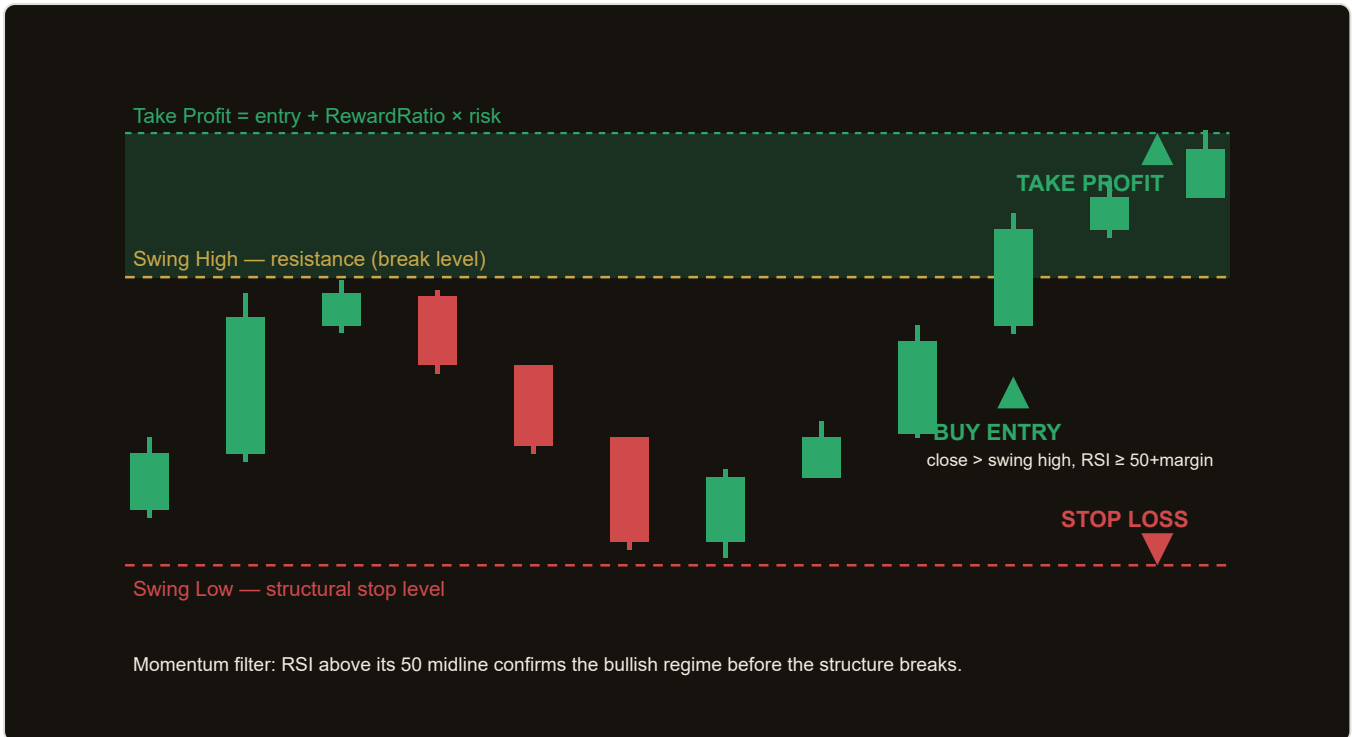
5. Trade management

The EA holds at most **one position per magic number** on the symbol; once a trade is open, the structural stop and target manage the exit entirely — there is no trailing or averaging. Signals are evaluated only once per newly-closed bar, never intrabar, which keeps behaviour deterministic and avoids reacting to noise within a forming candle.

Why it should work. The two filters are deliberately orthogonal. RSI confirms the market is already moving directionally, while the swing break demands that price physically commit through prior structure before risk is committed. Lone breakout systems get chopped up in ranges precisely because they lack that momentum screen.

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
RsiPeriod	14	RSI smoothing period, used as the momentum-regime gauge read against its 50 midline. Range 7–28, step 1.
MomentumMargin	5.0	How far RSI must sit beyond 50 to call the regime decisively bullish or bearish. Larger values demand stronger momentum. Range 0.0–20.0, step 1.0.
SwingHalfWidth	3	Fractal half-width: a swing pivot must strictly dominate this many bars on each side to be confirmed. Range 2–6, step 1.
StopBufferFrac	0.25	Stop buffer beyond the protective swing level, as a fraction of the breakout bar's range. Range 0.00–1.50, step 0.05.
RewardRatio	1.80	Take-profit distance as a multiple of the structural stop distance (reward-to-risk). Range 0.80–4.00, step 0.10.
MaxSpreadPoints	30	Skip the trade if the current spread (in points) is wider than this. Range 1–200, step 1.
Lots	0.10	Fixed order volume in lots. Range 0.01–1.00, step 0.05.
Magic	4827	Magic number identifying this EA's positions; one position per magic is held at a time. Range 0–9,999,999, step 1.

Recommended Settings

The strategy is designed for trending instruments where momentum and structure align. A sensible starting point:

- **Symbols:** a trending major or metal such as **GBPUSD** or **XAUUSD**.
- **Timeframe:** **M15** or **H1** — fast enough to catch continuation breaks, slow enough that swing pivots are meaningful.
- **RsiPeriod / MomentumMargin:** defaults of 14 / 5.0 give a balanced regime filter. Raise the margin to 8–10 to demand stronger momentum and take fewer, cleaner breaks.
- **SwingHalfWidth:** 3 by default; increase to 4–5 for more significant (but less frequent) structure on higher timeframes.
- **RewardRatio:** 1.80 by default. Trend-continuation breaks can support 2.0–2.5 in strongly trending conditions.
- **MaxSpreadPoints:** tighten for major FX pairs; widen for metals or instruments with naturally larger spreads.

Tip. Because risk is fully structural (swing-level stop, R-multiple target), this EA does not need ATR or pip tuning when you move between symbols or timeframes. Always backtest and forward-test on a demo account with your broker's specific spread and execution before committing real capital.

How to Install on MetaTrader 5

- 1 Copy `RsiSwingBreakout.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

Trading foreign exchange, CFDs, and other leveraged financial instruments involves substantial risk of loss and is not suitable for all investors. The strategies and tools described in this document are provided for **educational purposes only** and do not constitute financial advice, investment recommendations, or solicitation to trade. Always consult a qualified financial adviser before making trading decisions. Past backtest performance is not indicative of future results.