

Fractal Structure Break

Expert Advisor Documentation

PLATFORM

MetaTrader 5 (MT5)

TYPE

Break of Structure (Price Action)

TIMEFRAME

Any (H1 recommended)

WEBSITE

www.algotbot.live

⚠ 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

Fractal Structure Break is a pure price-action Expert Advisor built around the ICT concept of a **Break of Structure (BoS)**. It uses *no indicators of any kind* — every decision is derived directly from the raw highs, lows, and closes of completed candles.

The EA continuously maps the market's structure by locating swing highs and swing lows with a symmetric fractal pivot. When that structure is trending (a Higher Low for bullish, a Lower High for bearish) and price **closes** decisively beyond the most recent swing, the EA reads it as a continuation of the trend and opens a trade in that direction. The protective stop is anchored to the opposing structural swing, and the target is a fixed reward-to-risk multiple of that structural risk.

Because the EA only ever reads from `ctx.PrimaryTimeframe` (the chart's own timeframe), it adapts to whatever timeframe you attach it to — there are no hard-coded periods. It manages a single position at a time per Magic number, making its behaviour easy to follow and audit.

At a glance: Fractal swing mapping → trending structure filter (Higher Low / Lower High) → confirmed close beyond the fresh swing → entry, with the stop parked at the protected structural swing and a fixed R:R target. Acts only on **closed bars**, never intrabar.

How It Works

1. Fractal Swing Detection

A swing point is found using a symmetric fractal of half-width `SwingStrength` (default `3`). A candle qualifies as a **swing High** when its High is *strictly* above the Highs of its `SwingStrength` neighbours on *each* side; the mirror condition (Low strictly below the neighbours on both sides) marks a **swing Low**. A larger value demands a more pronounced pivot and produces fewer, more significant swings.

2. Reading Market Structure

The EA tracks the two most recent confirmed swings on each side. Structure is judged from how the latest swing compares to the prior one:

- **Bullish structure:** the latest swing Low is *higher* than the previous swing Low (a **Higher Low**).
- **Bearish structure:** the latest swing High is *lower* than the previous swing High (a **Lower High**).

Each newly confirmed swing is flagged as "*fresh*" — meaning it has not yet been consumed by a break. Once a swing is traded through, it is marked as used so the same level cannot trigger a second entry.

3. The Break of Structure (Entry)

A Break of Structure fires only when a **closed** bar closes beyond the most recent fresh swing by a small buffer. The buffer is `BreakBufferMult × recentRange`, where `recentRange` is the average High-to-Low range of the last `RangeWindow` bars — keeping the whole confirmation rooted in price action rather than a fixed pip value.

- **Long entry:** bullish structure (Higher Low) is in place *and* the close prints above the fresh swing High plus the buffer. The EA buys at the Ask.
- **Short entry:** bearish structure (Lower High) is in place *and* the close prints below the fresh swing Low minus the buffer. The EA sells at the Bid.

4. Stop Loss & Take Profit

Risk is defined structurally rather than as an arbitrary distance:

- **Long:** stop is placed below the protected (Higher) Low, padded by `StopPadMult × recentRange`. Risk = entry – stop.
- **Short:** stop is placed above the protected (Lower) High, padded by `StopPadMult × recentRange`. Risk = stop – entry.
- **Target:** the take-profit is set at `RewardRisk × risk` away from entry (default `2.0`, i.e. a 2:1 reward-to-risk).

If the computed risk is not positive (for example, price has already run beyond the structural swing), the trade is skipped — the EA never opens a position without a valid, protective stop.

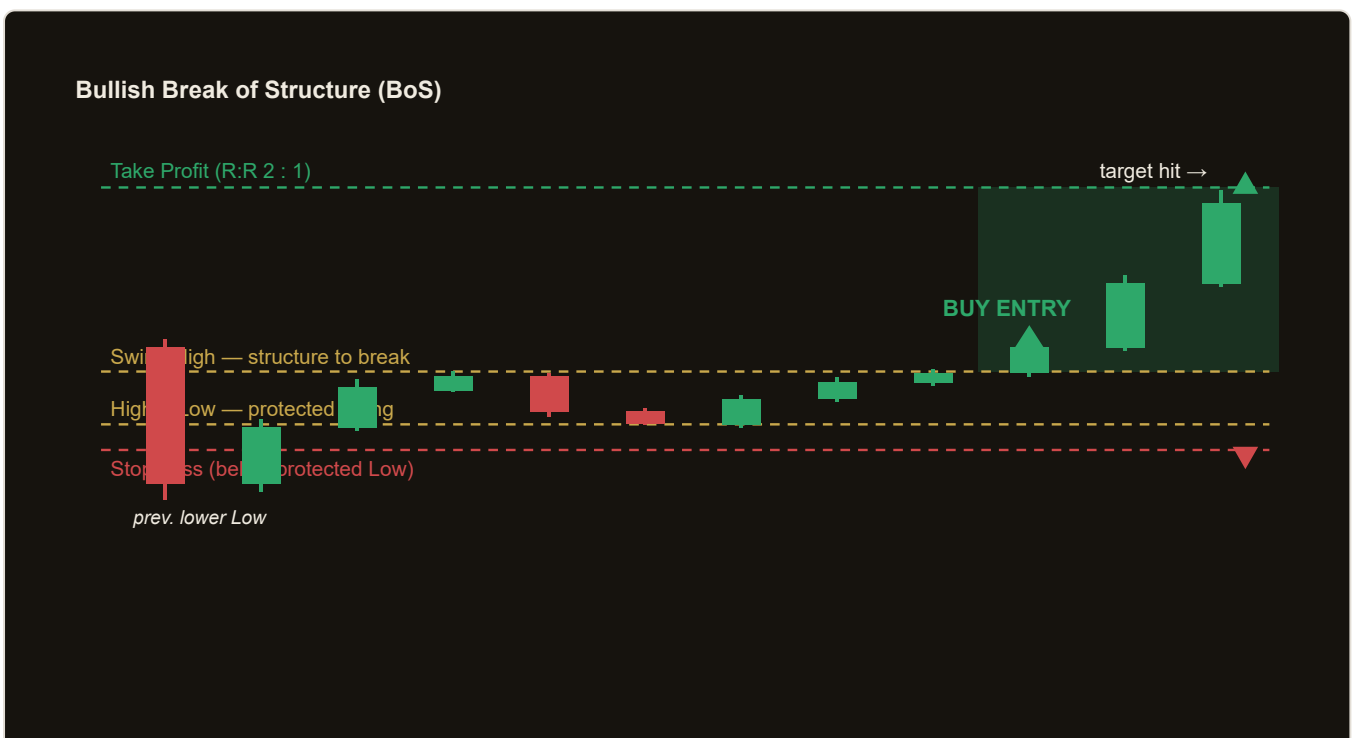
5. Position Management

The EA enforces **one open position per Magic number** (default `70013`) at any time. While a trade is live, new signals are ignored; once it closes at the stop or target, the EA resumes scanning for the next fresh Break of Structure. All logic runs once per newly-closed bar, so signals are stable and never repaint intrabar.

Why "fresh" swings matter: by consuming a swing the instant it is broken, the EA avoids re-entering on the same structural level repeatedly. Each trade requires a brand-new pivot to form and then be broken — a built-in filter against over-trading a single move.

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
SwingStrength	3	Fractal half-width: the number of bars required on <i>each</i> side of a pivot to confirm it as a swing. Higher = fewer, more significant swings. Range 2–8, step 1.
RewardRisk	2.0	Reward-to-risk multiple applied to the structural stop distance to set the take-profit. Range 1.0–5.0, step 0.5.
StopPadMult	0.5	Extra padding beyond the structural swing for the stop, expressed as a fraction of recent range. Range 0.0–2.0, step 0.25.
BreakBufferMult	0.10	The close must clear the broken swing by this fraction of recent range to count as a valid Break of Structure. Range 0.0–1.0, step 0.10.
RangeWindow	14	Number of recent bars averaged to estimate the "recent range" used to size the break buffer and stop padding. Range 5–50, step 1.
Lots	0.10	Fixed trade size (volume in lots) for each position. Range 0.01–1.0, step 0.05.
Magic	70013	Magic number identifying this EA's trades. Only one position per Magic is held open at a time.

Recommended Settings

Because the EA is fully price-action based and reads from the chart's own timeframe, it can be applied broadly. The settings below are a sensible starting point for testing, not a guarantee of profitability.

- **Timeframe:** H1 offers a good balance of signal frequency and structural clarity. Lower timeframes (M15–M30) generate more — but noisier — swings; higher timeframes (H4–D1) produce fewer, cleaner Breaks of Structure.
- **Symbols:** trending, liquid instruments such as major FX pairs (EUR/USD, GBP/USD) or indices, where structure is well respected.
- **SwingStrength:** keep at **3** for H1; raise to **4–5** on lower timeframes to filter out minor pivots.
- **RewardRisk:** **2.0** is a balanced default. Trend-following traders may extend to **3.0** + to let winners run, accepting a lower hit rate.
- **BreakBufferMult / StopPadMult:** increase both slightly on noisy or volatile symbols to avoid premature breaks and stop-outs.

Example configuration (H1 EUR/USD)

SwingStrength = 3 · RewardRisk = 2.0 · StopPadMult = 0.5 · BreakBufferMult = 0.10 · RangeWindow = 14 · Lots = 0.10. This waits for a clear Higher-Low / Lower-High structure, requires the close to clear the swing by 10% of recent range, and targets twice the structural risk.

Position sizing: the `Lots` input is a fixed volume — it does not scale to account equity. Choose a size appropriate to your balance and risk tolerance, and always validate on a demo account before trading live.

How to Install on MetaTrader 5

- 1 Copy `FractalStructureBreak.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

Tip: the EA acts on closed bars only, so after attaching it you will not see activity until the current bar completes and a fresh Break of Structure occurs. Use the Strategy Tester first to confirm behaviour on historical data before going live.

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.