

StructureBreakoutTrend

Expert Advisor Documentation & Strategy Guide

PLATFORM

MetaTrader 5 (MT5)

TYPE

Trend-Following Breakout (Price Action)

TIMEFRAME

H1 (GBPUSD / XAUUSD)

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

StructureBreakoutTrend is a pure price-action, trend-following Expert Advisor that trades *break of structure* (BOS) continuations. It uses **no indicators whatsoever** — no moving averages, no RSI, no ATR, no oscillators. Every decision is built directly from real swing pivots in the raw price series.

The EA maps the market's structure the way a discretionary price-action trader does: it locates confirmed swing highs (resistance) and swing lows (support), reads the trend from the sequence of those swings using classic Dow theory, and then trades *with* the trend the moment price breaks the most recent structural level. Because every pivot is only used once it has been fully confirmed by the bars that follow it, the levels **never repaint**.

Risk is anchored to structure rather than to a fixed point distance: the stop is placed just beyond the opposing swing that defines the trend, and the target is a fixed reward-to-risk multiple of that distance. This makes the system scale naturally across any symbol or timeframe without referencing point size.

Note: This is a *continuation* strategy — it buys strength and sells weakness, trading in the direction of the established trend. It is the opposite of a counter-trend or "fade the level" approach.

How It Works

1. Building the structure (swing pivots)

The EA keeps a rolling window of closed bars and scans them for swing pivots. A bar qualifies as a pivot only when it is the strict extreme of a symmetric window of `PivotLeftRight` bars on each side:

- **Swing high (resistance):** a bar whose high is strictly greater than the high of every bar within `PivotLeftRight` bars to its left *and* right.
- **Swing low (support):** a bar whose low is strictly lower than the low of every bar within `PivotLeftRight` bars to its left *and* right.

A pivot is only recognised once it is **confirmed** — that is, once `PivotLeftRight` bars have closed to its right. Because confirmation requires bars that already exist, the level is fixed forever the moment it appears; it cannot shift or disappear later. This is what makes the strategy non-repainting.

2. Reading the trend (Dow theory, no indicator)

Using the two most recent confirmed swing highs and the two most recent confirmed swing lows, the EA classifies market structure:

- **Uptrend:** the last two swing highs are ascending (higher highs) *and* the last two swing lows are ascending (higher lows).
- **Downtrend:** the last two swing highs are descending (lower highs) *and* the last two swing lows are descending (lower lows).

If neither condition holds (mixed structure), no trade is taken.

3. Entry — break of structure with the trend

The EA acts **once per newly-closed bar** and holds at most one position per magic number at a time. With the trend confirmed, it looks for the first close beyond the most recent structural level:

- **Long:** in a confirmed uptrend, the just-closed bar closes *strictly above* the most recent swing-high resistance for the first time (the previous bar's close was at or below it). This is a bullish break of structure → **buy the continuation** at the Ask.
- **Short:** in a confirmed downtrend, the just-closed bar closes *strictly below* the most recent swing-low support for the first time (the previous bar's close was at or above it). This is a bearish break of structure → **sell the continuation** at the Bid.

The "first time" check (current close beyond the level while the previous close was not) ensures the EA reacts only to the fresh breakout, not to every subsequent bar that remains beyond the level.

4. Exit — structural stop and R-multiple target

Both stop and target are derived from the active swing range, where $\text{swingRange} = \text{resistance} - \text{support}$ and $\text{buffer} = \text{StopBufferFrac} \times \text{swingRange}$:

- **Long stop loss:** just below the trend's higher-low support → $\text{support} - \text{buffer}$.
- **Short stop loss:** just above the trend's lower-high resistance → $\text{resistance} + \text{buffer}$.
- **Take profit:** a fixed reward-to-risk multiple of the stop distance — $\text{entry} \pm \text{RewardRatio} \times \text{risk}$, where risk is the distance from entry to the structural stop.

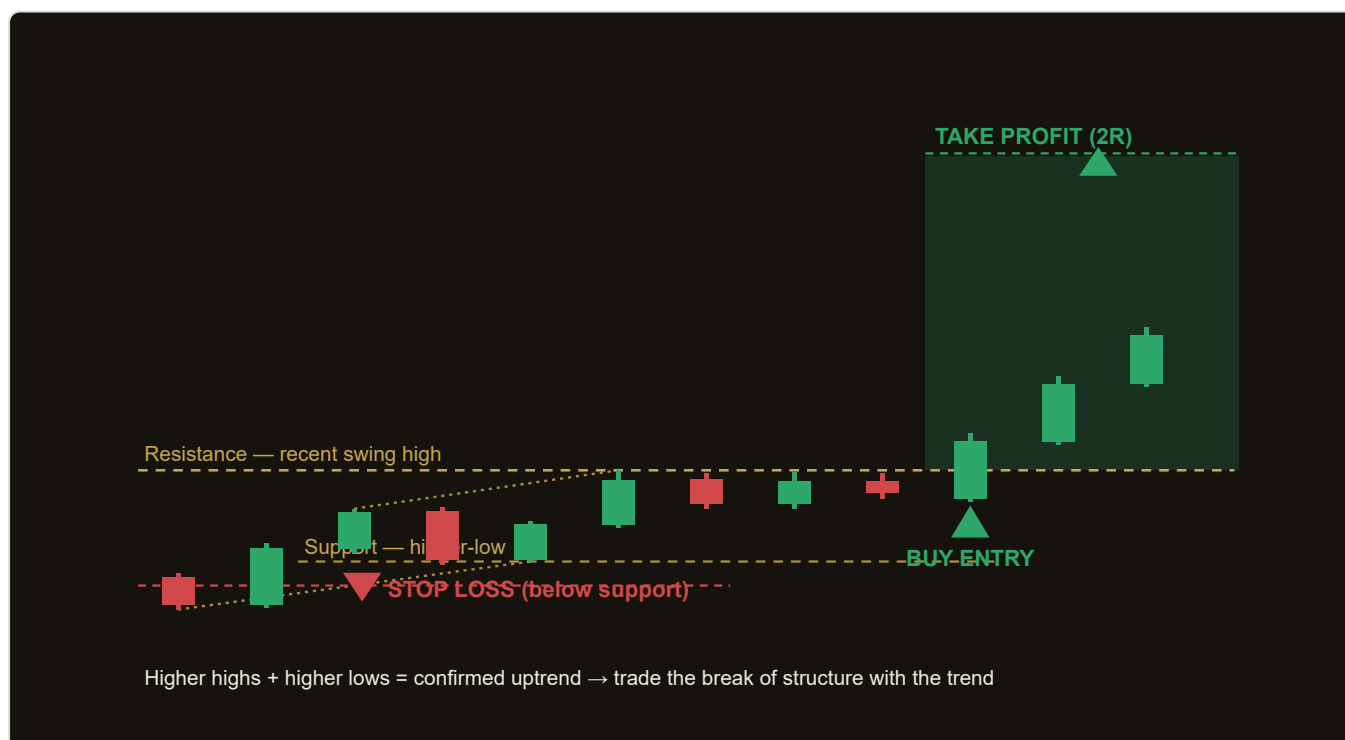
Because the buffer is a fraction of the swing range rather than a fixed number of points, the stop placement adapts automatically to volatility, symbol, and timeframe. Once placed, the position is left to the broker-side stop and target — there is no trailing or partial-close logic.

Worked example (long)

Suppose the recent swing-high resistance is 1.27500 and the recent higher-low support is 1.26500, so the swing range is 0.01000. With $\text{StopBufferFrac} = 0.10$, the buffer is 0.00100. A bar closes at 1.27560 — the first close above resistance, in a confirmed uptrend. Entry fills at the Ask ≈ 1.27570 ; the stop is $1.26500 - 0.00100 = 1.26400$, giving a risk of 0.01170. With $\text{RewardRatio} = 2.00$, the target sits at $1.27570 + 2 \times 0.01170 = 1.29910$.

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
PivotLeftRight	3	Number of bars required on each side of a bar for it to qualify as a swing pivot. Larger values produce fewer, more significant swings (and slower-confirming, less sensitive structure). Range 2–8, step 1.
StopBufferFrac	0.10	Stop-loss buffer placed beyond the structural swing, expressed as a fraction of the current swing range (resistance – support). Higher values give wider, safer stops at the cost of larger risk per trade. 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). A value of 2.00 targets twice the risk. Range 1.00–6.00, step 0.50.
Lots	0.10	Fixed trade volume in lots for each position. Range 0.01–1.00, step 0.05.
Magic	7401	Magic number identifying this EA's positions. The "one position at a time" rule is enforced per magic on the symbol. Range 0–9,999,999, step 1.

Recommended Settings

The strategy is designed as a swing trend-following style that lets winners run via the R-multiple target. The defaults are tuned for that purpose:

- **Symbol & timeframe:** a trending instrument such as **GBPUSD** or **XAUUSD** on **H1**. Trending markets favour continuation breakouts; choppy, range-bound symbols will generate more false breaks.
- **PivotLeftRight = 3:** a balanced sensitivity that captures meaningful structure without waiting too long for confirmation. Raise to 4–6 on higher timeframes or noisy symbols to filter minor swings.
- **StopBufferFrac = 0.10:** keeps the stop just clear of the structural swing. Increase toward 0.15–0.25 if breakouts are frequently stopped on the retest.
- **RewardRatio = 2.00:** a 2:1 target keeps the system positively skewed even with a sub-50% win rate. Trend-followers may extend to 3.00+ to let runners develop.
- **Lots:** size according to account equity and per-trade risk tolerance; the fixed-lot default is a starting point, not a risk-managed sizing.

Tip: Because entries depend on confirmed, non-repainting structure, always validate parameter changes in the Strategy Tester on "Every tick based on real ticks" before going live. Allow enough history so at least two confirmed swing highs and two confirmed swing lows exist before signals appear.

How to Install on MetaTrader 5

- 1 Copy `StructureBreakoutTrend.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. GBPUSD or XAUUSD, H1)
- 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.