

Flag Pole Projection

Expert Advisor Documentation

PLATFORM

MetaTrader 5 (MT5)

TYPE

Breakout / Trend Continuation

TIMEFRAME

M15 / H1

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

Flag Pole Projection is a pure price-action Expert Advisor that trades the classic **bull flag / bear flag** continuation pattern to its textbook **measured-move** target. It uses **no indicators of any kind** — no moving averages, RSI, ATR, or channels. Every decision is made from raw candle geometry: the size, shape, and direction of recent bars.

The pattern has two parts. First a **pole**: a strong, clean directional impulse where the net travel of the candles dwarfs the calm range that preceded it. Then a **flag**: a tight, shallow pause that hangs near the top (bull) or bottom (bear) of that pole without giving much back. The trading premise is that a brief, orderly pause after a powerful thrust is *unfinished business* — price tends to resolve the pause in the same direction the pole was already moving.

The EA enters only when **live price actually breaks the flag** (with a small buffer) and the break is still **fresh** — it deliberately refuses to chase a move that has already run a full flag-range beyond the breakout. Risk is parked on the far side of the flag, where the continuation thesis would be proven wrong, and the profit target is the pole's height projected forward from the entry.

Design philosophy: the impulse defines the direction, the pause defines the risk, and the pole defines the reward. Because the whole model is geometric, it transfers cleanly across trending instruments (e.g. XAU/USD, GBP/USD) and across any single primary timeframe selected at backtest time.

How It Works

On every tick the EA checks whether a new bar has closed. It only re-evaluates once per newly-closed bar, working exclusively with completed candles for the pattern and live bid/ask quotes for the breakout trigger. The most recent bars are laid out as three contiguous windows.

1. The Baseline (quiet stretch)

The **BaselineLookback** bars that sit *before* the pole are used to compute an average high-low bar range. This is the “normal” volatility yardstick the pole must beat — it is raw geometry, not a smoothed indicator.

2. The Pole (impulse)

The **PoleBars** candles after the baseline must form a genuine thrust. Two conditions must both hold:

- **Magnitude:** the net open→close travel of the pole must be at least **PoleFactor** × the baseline average bar range.
- **Dominance:** that same net travel must also cover at least **PoleDominance** of the pole's total high-low range — so the move is a clean directional thrust, not chop trapped inside a wide band.

The **pole height** (its highest high minus its lowest low) becomes the unit of measure for both the flag's tightness test and the profit target.

3. The Flag (pause)

The most recent **FlagBars** candles must form a tight, shallow consolidation:

- **Tightness:** the flag's whole high-low range must be ≤ **FlagMaxFrac** × pole height.
- **Shallow give-back:** the pullback from the pole extreme (pole high for a bull flag, pole low for a bear flag) must also stay within **FlagMaxFrac** × pole height — a pause near the extreme, not a reversal.

Entry Logic

A breakout buffer of **BufferFrac** × flag range is added beyond the flag edge to filter noise.

- **LONG (bull flag):** up-pole + tight shallow flag near the pole top. Buy when the live **Ask** rises above **flag high + buffer**, and the Ask is still within one flag-range of that level (fresh break, not a chase).
- **SHORT (bear flag):** the exact mirror. Sell when the live **Bid** falls below **flag low - buffer**, while still within one flag-range of the trigger.

Freshness gate: the entry window is $\text{trigger} \leq \text{price} \leq \text{trigger} + \text{flag range}$. If price has already extended a full flag-range past the breakout by the time the bar closes, the trade is skipped. This is what keeps the EA from buying tops and selling bottoms of moves that have already run.

Exit Logic — Stop Loss & Take Profit

Both exits are placed on the order at entry and the position is then left to resolve structurally (no trailing or scaling). Only one position per magic number is allowed on the symbol at a time.

- **Stop Loss (long):** $\text{flag low} - \text{buffer}$ — just beyond the flag floor, where the continuation thesis fails.
- **Stop Loss (short):** $\text{flag high} + \text{buffer}$ — just beyond the flag ceiling.
- **Take Profit:** the measured move — $\text{entry} \pm (\text{TargetFrac} \times \text{pole height})$, projected up for longs and down for shorts.

Worked example (bull flag)

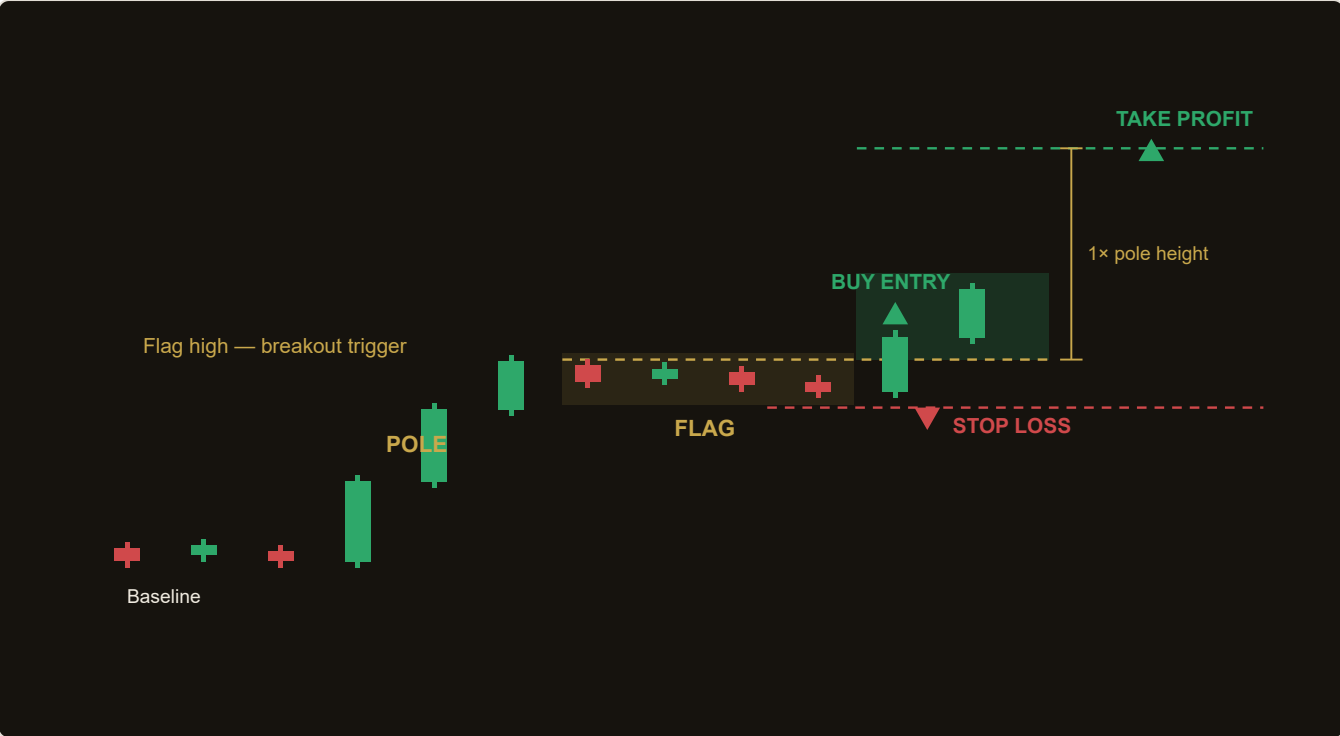
Suppose the pole runs from a low of 2000.0 to a high of 2010.0 — a pole height of 10.0. A tight flag forms with a high of 2009.5 and a low of 2007.0 (range 2.5), giving a buffer of 0.25 at $\text{BufferFrac} = 0.10$. The live Ask breaks above 2009.75 (flag high + buffer) and is still fresh. The EA buys, places the stop at 2006.75 (flag low - buffer) and sets the target at entry + 10.0 (the full pole height at $\text{TargetFrac} = 1.00$).

Trade Filters

- **Spread gate:** if the live spread exceeds MaxSpreadPoints , the trade is skipped — breakout entries pay the spread, so a wide spread is rejected.
- **One position per magic:** no pyramiding. A new setup is only considered once the prior position has closed.
- **Closed-bar evaluation:** the pattern is measured on completed candles only; the live quote is used purely for the breakout trigger.

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
PoleBars	5	Number of candles that form the impulsive pole. Range 3–12, step 1.
PoleFactor	2.00	The pole's net move must be at least this multiple of the pre-pole average bar range. Range 1.20–5.00, step 0.10.
PoleDominance	0.55	Fraction of the pole's high-low range that its net travel must cover, ensuring a clean directional thrust. Range 0.30–0.90, step 0.05.
FlagBars	4	Number of candles that form the consolidation flag. Range 2–10, step 1.
FlagMaxFrac	0.50	The flag range AND the give-back from the pole extreme must each be \leq this multiple of the pole height. Range 0.20–1.00, step 0.05.
BaselineLookback	20	Quiet stretch of bars before the pole used to compute the average-range baseline. Range 10–50, step 5.
TargetFrac	1.00	Measured-move target = this multiple of the pole height, projected from entry. Range 0.30–2.00, step 0.10.
BufferFrac	0.10	Breakout and stop buffer expressed as a fraction of the flag range. Range 0.00–0.50, step 0.05.
MaxSpreadPoints	30	Skip the trade if the live spread (in points) is wider than this. Range 1–200, step 1.
Lots	0.10	Order volume in lots. Range 0.01–1.00, step 0.01.
Magic	7411	Magic number used to identify and manage this EA's positions. Range 0–9,999,999, step 1.

Recommended Settings

The defaults are a balanced starting point for trending instruments on intraday timeframes. Tune them to the symbol and timeframe you intend to run, then validate in the Strategy Tester before going live.

INSTRUMENTS & TIMEFRAMES

- **Symbols:** trending instruments such as XAU/USD or GBP/USD work well, but the geometry runs on any liquid symbol.
- **Timeframe:** M15 or H1 as the single primary timeframe. The EA always evaluates whatever timeframe the chart uses at backtest time.

TUNING NOTES

- **Stricter setups:** raise `PoleFactor` and `PoleDominance` for fewer, cleaner thrusts; lower `FlagMaxFrac` to demand tighter flags.
- **Reward vs. hit-rate:** increasing `TargetFrac` stretches the measured-move target (bigger winners, lower hit-rate); decreasing it banks profit sooner.
- **Noise control:** increase `BufferFrac` to require a more decisive break beyond the flag, at the cost of a slightly worse entry and wider stop.
- **Cost control:** set `MaxSpreadPoints` to suit the spread profile of your broker and symbol — tighter on majors, looser on metals.

Tip: because the target and stop both scale with the pole height, the EA self-adjusts its risk and reward to current volatility. Keep `Lots` aligned with your account size so that a stop at `flag low - buffer` represents a risk you are comfortable with on every trade.

How to Install on MetaTrader 5

- 1 Copy `FlagPoleProjection.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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