

Heikin Ashi Trend Shift

Expert Advisor Documentation

PLATFORM

MetaTrader 5 (MT5)

TYPE

Trend-Following Continuation

TIMEFRAME

H1 (adaptive)

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

Heikin Ashi Trend Shift is a trend-following continuation system built on **Heikin-Ashi candles**. Raw OHLC price is noisy — adjacent candles flip colour constantly, so a naive "buy the first green bar" rule churns endlessly on false signals. Heikin-Ashi averages each candle into its neighbours, smoothing that noise into clean, persistent runs of a single colour that give a far more reliable read on who is actually in control of the market.

The strategy trades the **moment the Heikin-Ashi colour shifts back in the direction of the prevailing trend** — the first smoothed candle that flips in favour of the trend after a counter-trend pause. It is a *continuation* entry, not a reversal guess: it buys the resumption of an established uptrend and sells the resumption of an established downtrend.

Every measurement is taken on the primary timeframe only and is fully objective. An EMA of raw closes acts as a regime gate (longs only above it, shorts only below it), a body-vs-ATR noise gate rejects indecision candles, and all risk is ATR-scaled so the same logic ports cleanly to any symbol or timeframe. The default playground is a liquid FX major or metal — for example EURUSD or XAUUSD — on the H1 chart, but the code reads the chart's timeframe everywhere and runs on whatever it is attached to.

Why Heikin-Ashi? Heikin-Ashi ("average bar" in Japanese) is a recursive smoothing of ordinary candlesticks.

Because each candle folds in the previous one, short-lived counter-moves are absorbed rather than displayed, so a genuine trend shows up as an uninterrupted block of one colour. This EA computes the Heikin-Ashi series once per closed bar and never repaints.

How It Works

Heikin-Ashi Construction

The smoothed candles are computed recursively, once per *closed* bar, so the series never repaints:

```
haClose = (Open + High + Low + Close) / 4
haOpen  = (prevHaOpen + prevHaClose) / 2    (first bar seeds with (Open + Close) / 2)
```

A smoothed candle is **bullish** when `haClose > haOpen` and **bearish** when `haClose < haOpen`. The recursion is seeded from an older warmed-up bar and rolled forward, so trimming stored history never changes the current values.

Trend Filter — the Regime Gate

An **EMA of raw closes** keeps the system on the right side of the market. Longs are only permitted while price closes **above** the EMA; shorts only while price closes **below** it. This is what lets the strategy adapt: in an uptrend it only buys shifts, in a downtrend it only sells them, and in the chop around the EMA the two filters cancel and it mostly stands aside.

Entry — the Colour Shift

The trigger is the first smoothed candle that flips back in favour of the trend after a counter-trend pause:

- **Long** — in an uptrend (close above EMA), the just-closed Heikin-Ashi candle flips **bullish** after the prior candle was *not* bullish (a resumed up-shift).
- **Short** — in a downtrend (close below EMA), the just-closed candle flips **bearish** after the prior candle was *not* bearish (a resumed down-shift).

The Noise Gate

The main false-signal filter rejects tiny indecision candles. The shift candle's body must be at least

`BodyAtrFrac × ATR` :

```
haBody = |haClose - haOpen|
require: haBody >= BodyAtrFrac × ATR
```

A doji-like flip with a wafer-thin body carries little conviction, so it is skipped. Only shifts with real body behind them are traded.

Risk & Trade Management

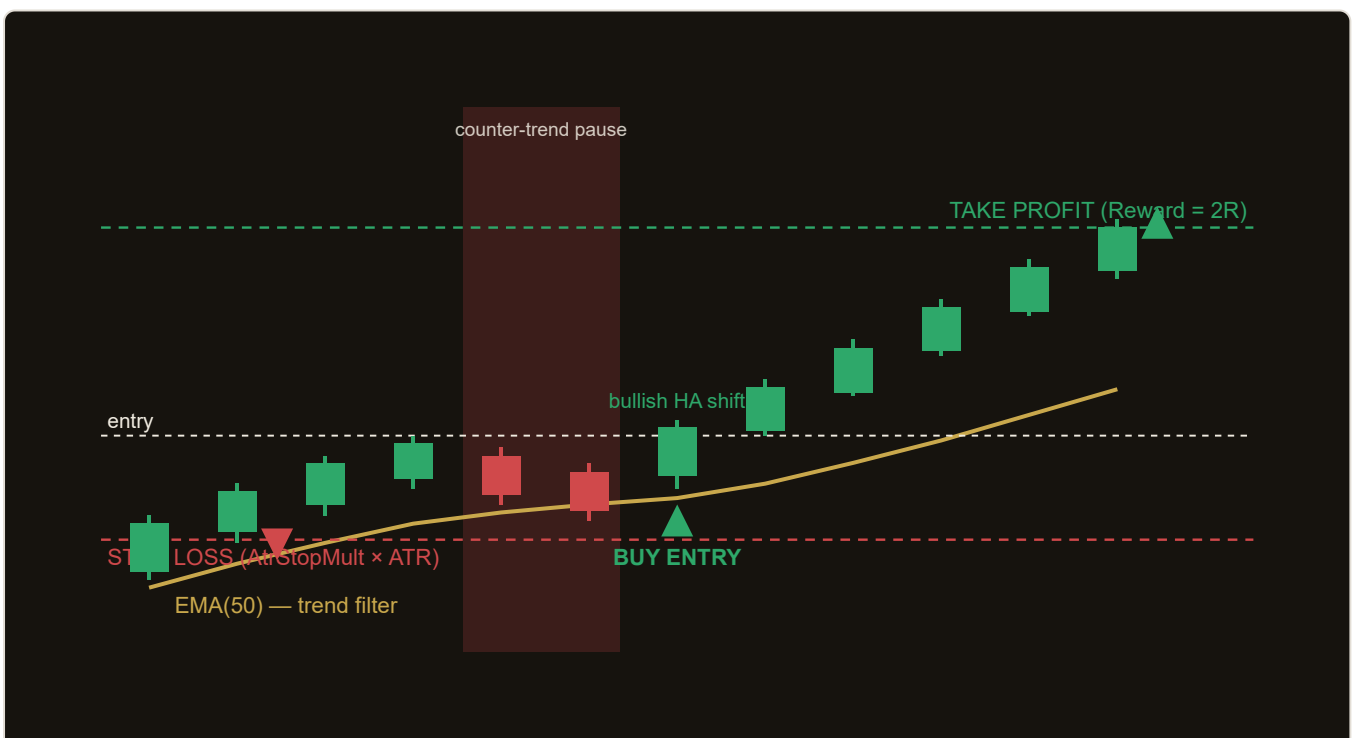
All levels are ATR-scaled so the strategy ports to any symbol or timeframe:

- **Stop loss** — placed `AtrStopMult × ATR` from entry.
- **Take profit** — `RewardRatio ×` the stop distance, so trend winners pay for the filtered-out losers.
- **Opposite-shift early exit** — if the smoothed colour shifts against an open trade, the position is closed immediately rather than waiting for the full stop.
- **ATR trailing stop** — a one-directional trailing stop ratchets the stop behind price (never against it) as the run extends, locking in open profit without capping it. Setting `TrailAtrMult = 0` disables it.

One position at a time. The EA holds at most one open position per Magic number and never stacks entries. Signals are evaluated once per newly-closed bar, so intrabar noise cannot trigger repeated orders.

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.

Reading the illustration

Price is trending up and holding above the gold EMA, so only long shifts are allowed. A short counter-trend pause prints two bearish Heikin-Ashi candles (the shaded zone). The next candle flips bullish after a non-bullish prior candle — a trend-aligned *colour shift* — and its body clears the ATR noise gate, so a long is opened. The initial stop sits $\text{AtrStopMult} \times \text{ATR}$ below entry and the target sits at RewardRatio (2R) above it. As price runs, the ATR trailing stop would ratchet up behind it, protecting the open profit.

Parameters

Parameter	Default	Description
EmaPeriod	50	Period of the trend-filter EMA on raw closes. Longs only trade above it, shorts only below it. Range 20–200, step 5.
AtrPeriod	14	ATR lookback used by the noise gate, the initial stop and the trailing stop. Range 7–30, step 1.
BodyAtrFrac	0.15	Minimum Heikin-Ashi shift-candle body, as a fraction of ATR — the main false-signal filter. Range 0.00–1.50, step 0.05.
AtrStopMult	1.50	Initial stop-loss distance from entry, in ATR multiples. Range 0.50–5.00, step 0.10.
RewardRatio	2.00	Take-profit distance as a multiple of the stop distance (the R multiple). Range 1.00–6.00, step 0.50.
TrailAtrMult	1.50	ATR trailing-stop distance; the stop ratchets to price minus this (longs). Set 0 to disable trailing. Range 0.00–5.00, step 0.10.
Lots	0.10	Order volume in lots. Range 0.01–1.00, step 0.05.
Magic	5731	Magic number identifying this EA's positions. One position per Magic. Range 0–9,999,999, step 1.

Recommended Settings

The defaults are tuned for a liquid FX major or metal on the H1 chart, but because every threshold is ATR-scaled the strategy adapts to other symbols and timeframes without re-tuning.

- **Symbols:** liquid FX majors or metals — for example EURUSD or XAUUSD.
- **Timeframe:** H1 as the primary; the EA reads the attached chart's timeframe everywhere and runs on whatever it is tested on.

- **Trend filter:** keep `EmaPeriod` near 50 for H1. A longer EMA (e.g. 100–200) trades fewer, higher-conviction shifts; a shorter EMA reacts faster but admits more chop.
- **Noise gate:** raise `BodyAtrFrac` toward 0.30–0.50 to demand stronger shift candles and cut false signals; lower it toward 0.00 for more (but noisier) entries.
- **Risk shape:** the default $1.5 \times \text{ATR}$ stop with a 2R target favours trend continuation. Widen `AtrStopMult` on choppier symbols; raise `RewardRatio` only if the market trends persistently.

Tip — validate before going live. Always backtest and forward-test on a demo account with your exact broker, symbol and timeframe before committing real capital. ATR-based levels mean the strategy behaves differently across instruments with different volatility profiles.

⚠ Position sizing. The `Lots` input is a fixed volume and does not scale to account equity or risk. Size it deliberately for your account and never risk more per trade than you can afford to lose.

How to Install on MetaTrader 5

- 1 Copy `HeikinAshiTrendShift.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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