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Fair Value Gap Stack Rider

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Price Action — FVG Continuation	M5 – M15	www.algobot.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

The **Fair Value Gap Stack Rider** is a pure price-action Expert Advisor for MetaTrader 5. It uses **no indicators of any kind** — every decision is derived directly from raw candle highs, lows, opens and closes. The strategy is built around the single most-discussed "smart-money" concept in retail trading communities: the **Fair Value Gap (FVG)**, also known as a three-candle imbalance.

A Fair Value Gap forms when a strong middle candle moves so quickly that the first and third candles of a three-bar window do not overlap, leaving an untraded price void. On its own, a single FVG appears almost everywhere and carries little predictive value. The edge of this EA is that it ignores lonely gaps and only acts on a **"stack" — two or more unfilled gaps pointing the same direction, all formed within a few bars of each other**. A stack is the footprint of genuine institutional displacement: when a move is real, it tends to leave a cluster of imbalances rather than a single one.

Once a valid same-direction stack exists and broader market structure agrees, the EA waits patiently for price to **pull back into the freshest gap of the stack** and react in the trend direction before committing. This produces a high-conviction **continuation** entry rather than a speculative reversal bet. Stops are structure-based (placed just beyond the far edge of the whole cluster, so a true fill invalidates the idea) and targets are a fixed reward multiple of that measured risk.

> **Design philosophy:** A single imbalance is noise; a cluster of same-direction imbalances inside a short window is signal. The EA trades only the cluster, and only after price returns to it and confirms.

How It Works

1. Detecting a Fair Value Gap

On every fully closed bar the EA examines the most recent three-candle trio (`c1` oldest, `c2` middle / displacement, `c3` newest). The middle candle must show real displacement: its body size must be at least `MinDisplacementFactor` × the average high-low range of the last `RangeLookback` bars. The average range is hand-computed from raw candles — no ATR indicator is used.

- **Bullish gap:** `c2` closes up, displacement is strong, and `c1.High < c3.Low` (an upward void). The gap zone runs from `c1.High` (lower edge) to `c3.Low` (upper edge).
- **Bearish gap:** `c2` closes down, displacement is strong, and `c1.Low > c3.High` (a downward void). The gap zone runs from `c3.High` to `c1.Low`.

2. The Stack — the actual edge

Confirmed gaps are stored in a live list. Before any trade, the EA checks for a valid **stack** of same-direction gaps:

- At least `RequiredStack` unfilled gaps must point the same way.
- All gaps in the cluster must have formed within `StackWindow` bars of each other (oldest to newest index span).
- The EA hands back the **freshest already-settled gap** as the retrace target, plus the **far edge of the whole cluster** for stop placement.

3. Market structure filter

Direction is gated by a pure close-versus-close comparison: the latest close is compared to the close `StructureLookback` bars ago. Longs require an up-structure (price now above the past close); shorts require a down-structure. This keeps entries aligned with the prevailing leg.

4. Entry trigger — pullback & reaction

With structure and a stack both in agreement, the EA waits for price to mitigate the freshest gap and react:

- **Long:** the bar dips into the freshest bullish gap (`tagged`), then closes back up and holds the gap (`react`) → a market **Buy** is sent at the Ask.
- **Short:** the bar pushes up into the freshest bearish gap, then closes back down and holds → a market **Sell** is sent at the Bid.

Only one position per magic number is allowed at a time, and the EA acts at most once per fully closed bar. After a trade is sent the gap list is cleared so a fresh stack must rebuild before the next entry.

5. Stop loss & take profit

Risk is structural, not fixed-pip:

- **Stop loss** sits just beyond the far edge of the entire gap cluster (the lower edge for longs, the upper edge for shorts), offset by a buffer of `StopBufferMult` × average range. A genuine fill of the cluster therefore invalidates the setup and closes the trade.
- **Take profit** is a fixed reward multiple: `TakeProfitRR` × the measured risk distance from entry to stop.

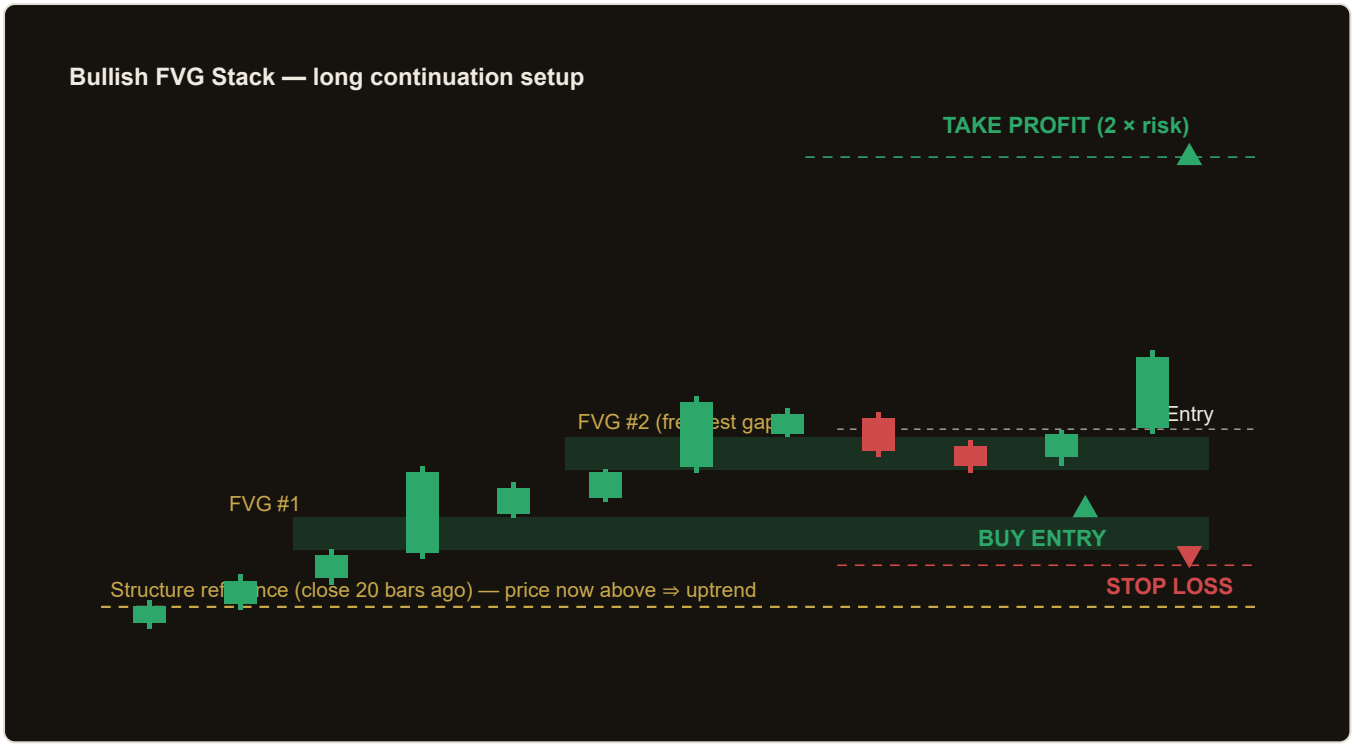
6. Gap lifecycle & pruning

Gaps do not live forever. On each closed bar the EA removes any gap that has gone stale (older than `ExpiryBars` bars) or that price has closed through against its direction. This keeps the stack a current, tradeable picture rather than a historical archive.

> **Worked long example**
>
> Average range = 5.0 points. A bullish candle prints a body of 7.0 points (≥ 1.20 × 5.0 = 6.0), leaving an unfilled gap. A second bullish gap forms four bars later — now `RequiredStack` = 2 is satisfied within `StackWindow` = 10. Structure is up. Price pulls back, taps the freshest gap, and the next bar closes back up inside it. The EA buys at the Ask, sets the stop just below the cluster's far edge minus the buffer, and targets 2.0 × that risk for take profit.

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
Lots	`0.10`	Fixed trade volume in lots (range 0.01–1.00, step 0.01).
MinDisplacementFactor	`1.20`	Minimum displacement-candle body size as a multiple of the average range, required for a gap to count (0.8–3.0, step 0.1). Higher = stricter, fewer gaps.
RequiredStack	`2`	Number of same-direction unfilled gaps that must exist before the EA will trade (1–4). This is the core "stack" threshold.
StackWindow	`10`	Maximum bar span allowed between the oldest and newest gap of a cluster (3–40). Keeps the stack tightly grouped in time.
TakeProfitRR	`2.00`	Take-profit distance as a reward-to-risk multiple of the entry-to-stop distance (1.0–5.0, step 0.5).
StopBufferMult	`0.40`	Extra stop-loss buffer beyond the cluster edge, as a multiple of the average range (0.0–2.0, step 0.1).
ExpiryBars	`18`	A gap is discarded if it has not been used within this many bars (4–60).
StructureLookback	`20`	Number of bars back used for the close-vs-close market-structure / trend check (5–60).
RangeLookback	`14`	Number of bars used to compute the mean high-low range that scales displacement and buffer (5–50).
Magic	`7350`	Magic number identifying this EA's positions. Use a unique value per chart/strategy instance.

Recommended Settings

The strategy is timeframe-agnostic and runs on whatever primary timeframe the chart uses, but it is designed for **liquid, impulsive markets** where genuine displacement and stacked imbalances actually occur.

- **Markets:** XAUUSD (gold) or a major index CFD; also major FX pairs during active sessions.
- **Timeframe:** M5 to M15, where impulsive legs leave clean multi-gap stacks.
- **Stack threshold:** keep `RequiredStack` = 2 for a balance of frequency and conviction; raise to 3 for higher selectivity on very liquid instruments.
- **Displacement:** the default `MinDisplacementFactor` = 1.20 suits gold and indices; increase it on noisier symbols to demand stronger candles.

- **Risk:** start with the default 0.10 lots and a `TakeProfitRR` of 2.00, then size to your account's risk tolerance.

> **Tip:** Because stops sit beyond the whole gap cluster, the risk distance grows with how spread out the stack is. Always confirm the resulting position size and stop distance are acceptable for your account before going live.

How to Install on MetaTrader 5

1. Copy `FairValueGapStackRider.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

> **Note:** If you have the source file `FairValueGapStackRider.mq5`, open it in MetaEditor and press **Compile (F7)** to generate the `.ex5` before attaching the EA.

Risk Warning

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