

Fvg Equilibrium Pullback

Expert Advisor Documentation

PLATFORM

MetaTrader 5 (MT5)

TYPE

Price-Action / FVG Pullback

TIMEFRAME

M15 – H1

WEBSITE

www.algotbot.live

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Overview

Fvg Equilibrium Pullback is a pure price-action Expert Advisor that trades the **fair-value gap (FVG)** — the three-candle footprint of a fast, one-sided move. It uses *no* indicators of any kind (no moving average, RSI, ATR, or stochastic); every threshold is measured directly from raw candle geometry.

A fair-value gap forms when a strong **displacement candle** travels so quickly that the wick of the candle before it and the wick of the candle after it never overlap, leaving an untraded **imbalance** in price. The midpoint of that imbalance is the gap's **equilibrium** — in ICT terminology the *consequent encroachment (CE)*, or the 50% line of the gap. Price very often retraces to exactly the equilibrium of a fresh gap before the displacement direction resumes.

Rather than chasing the move, the EA rests a **passive limit order** at the gap's 50% equilibrium and waits for price to come back to it. Filled at the midline, the trade rides the continuation; the stop sits just beyond the gap's far (origin) edge, so an invalidated gap is a small, structural loss. Only ever **one** setup is live at a time, and because every threshold scales to a plain mean candle range, the system needs no point-size tuning and runs on whatever symbol and timeframe is selected.

In one line: detect a fresh imbalance, rest a buy/sell limit at its 50% midline, and ride the continuation with a structural stop beyond the gap's origin.

How It Works

Detecting the gap

On each newly-closed bar the EA inspects the most recent three-candle trio and the recent volatility scale:

- **Volatility scale** — the plain mean candle range (high – low) over the last `RangeWindow` closed bars. Every distance threshold is expressed as a fraction of this average, so the logic is symbol- and timeframe-agnostic.
- **Displacement filter** — the middle candle of the trio must be body-dominant: its body divided by its full range must be at least `BodyDominance`. This confirms a real one-sided thrust rather than an indecisive candle.
- **Meaningful imbalance** — the gap height must be at least `MinGapFrac × avgRange`, filtering out trivial micro-gaps.

Bullish gap → BUY LIMIT at equilibrium

A bullish (up) imbalance requires three freshly-closed candles where the **high of the oldest candle is below the low of the newest candle**, with a bullish, body-dominant displacement candle in the middle:

- **Gap base** = oldest candle's high (the origin / far edge, stop side).
- **Gap top** = newest candle's low (the near edge).
- **Equilibrium (CE)** = midpoint of base and top — the buy-limit price.
- A **BUY LIMIT** is rested at the CE, but only if the current Ask is still *above* the CE (price must not already be inside the gap).
- **Stop loss** = gap base – `SlBufferFrac × avgRange` (just below the gap origin).
- **Take profit** = CE + `RiskReward × risk`, where *risk* is the CE-to-stop distance.

Bearish gap → SELL LIMIT at equilibrium

The exact mirror: a down imbalance where the **low of the oldest candle is above the high of the newest candle**, with a bearish, body-dominant displacement candle. A **SELL LIMIT** is rested at the CE (only if the current Bid is still *below* it), the stop sits a buffer *above* the gap base, and the take profit is the same R-multiple below the CE.

Worked example (bullish gap)

Suppose the trio leaves a gap from a base of `104.00` (oldest high) to a top of `110.00` (newest low). The equilibrium is `107.00`. With `SlBufferFrac` placing the stop at `103.00`, the structural risk is `4.00`. At `RiskReward = 2.00` the take profit is `107.00 + 2 × 4.00 = 115.00`. A buy limit rests at `107.00` and fills only if price pulls back into the gap to its midline.

Lifecycle & order management

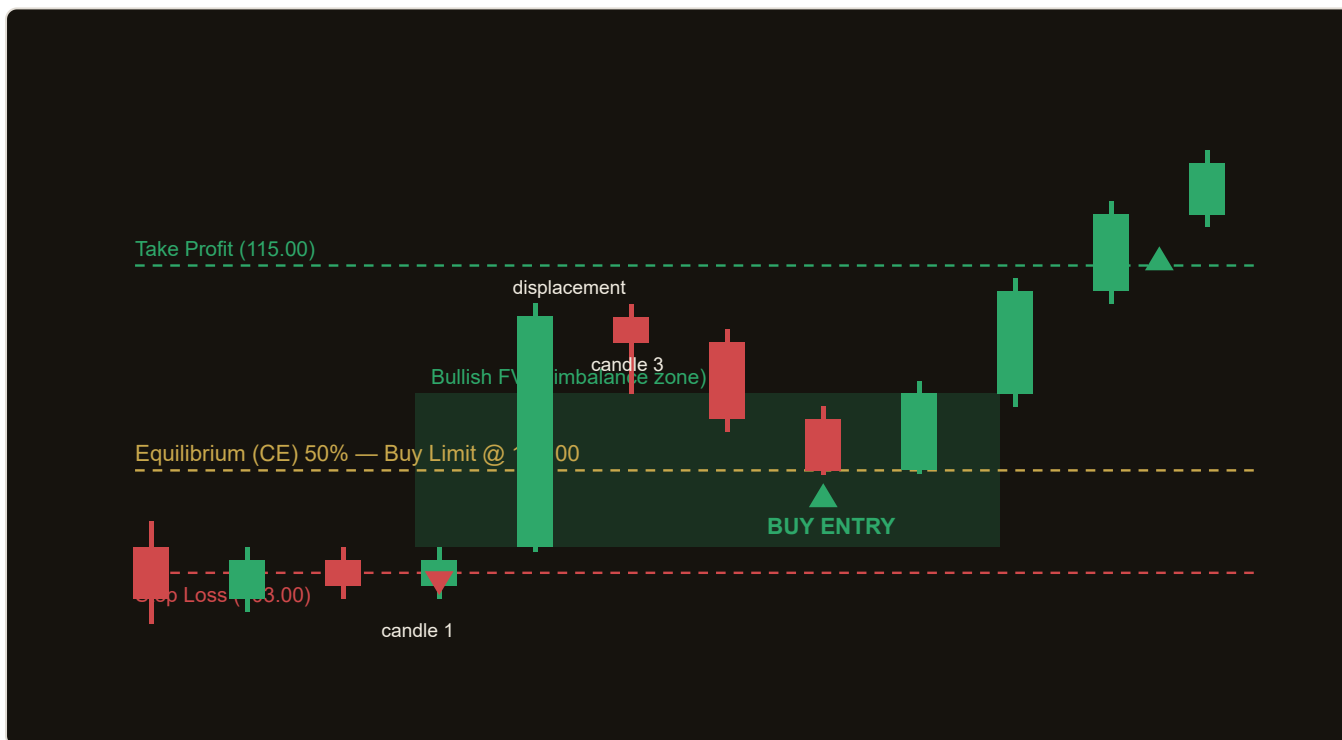
The EA enforces a strict single-setup state machine, evaluated once per closed bar:

- **Position live** — if a limit has filled into an open position, any stray pending order is cancelled and the stop loss / take profit manage the exit.
- **Limit resting** — an unfilled equilibrium limit is aged each bar and cancelled once it has rested for `ExpiryBars` bars without a fill. A second order is never stacked.
- **Flat & idle** — only then does the EA look for a fresh gap in the just-closed trio.

Why a limit, not a market order? Filling at the equilibrium means entering at the statistical mid-price of the imbalance — a better location than chasing the displacement, with a tightly defined structural stop just beyond the gap's origin.

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	Order volume in lots placed on the resting equilibrium limit. Range 0.01 – 1.00, step 0.01.
MinGapFrac	0.30	Minimum gap height as a fraction of the average candle range — filters out trivial imbalances. Range 0.05 – 1.50, step 0.05.
BodyDominance	0.55	Required displacement-candle body / range ratio — how one-sided the thrust must be. Range 0.30 – 0.90, step 0.05.
SIBufferFrac	0.25	Stop buffer beyond the gap's origin edge, as a fraction of the average range. Range 0.00 – 1.00, step 0.05.
RiskReward	2.00	Take-profit distance as a multiple of the structural stop distance. Range 1.00 – 5.00, step 0.25.
ExpiryBars	8	Cancel a resting equilibrium limit after this many bars without a fill. Range 2 – 40, step 1.
RangeWindow	20	Lookback (bars) for the average candle range that scales every threshold. Range 8 – 60, step 1.
Magic	8841	Magic number identifying this EA's orders and positions. Range 0 – 9,999,999, step 1.

Recommended Settings

The defaults are a balanced starting point for liquid, trend-prone instruments. Tune the gap and displacement filters to match how much an instrument respects fresh imbalances.

Markets & timeframes

- **Instruments** — liquid, trend-prone markets such as EUR/USD, XAU/USD (gold), and major indices, where displacement and imbalance behaviour is clean.
- **Timeframes** — M15 to H1. Lower timeframes generate more gaps but more noise; higher timeframes give fewer, more structural setups.

Tuning guidance

- **Fewer, cleaner setups** — raise `MinGapFrac` (e.g. 0.40–0.60) and `BodyDominance` (e.g. 0.65) to demand larger, more decisive imbalances.

- **More setups** — lower `MinGapFrac` toward 0.15–0.20, accepting smaller gaps and more frequent fills.
- **Stop placement** — widen `SlBufferFrac` on noisier instruments (e.g. gold) so a brief overshoot of the gap origin does not stop you out prematurely.
- **Target distance** — `RiskReward` of 1.5–2.5 suits continuation trades; higher multiples win less often but pay more per win.
- **Patience** — `ExpiryBars` controls how long a limit waits. Too short and good pullbacks are missed; too long and stale gaps linger.

Tip: because every threshold scales to `RangeWindow`'s mean candle range, the EA adapts automatically as volatility changes. Always validate a chosen configuration in the MT5 Strategy Tester on your specific symbol and broker before trading live.

How to Install on MetaTrader 5

- 1 Copy `FvgEquilibriumPullback.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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