

# Inverted Gap Limit Continuation

Expert Advisor Documentation

## PLATFORM

MetaTrader 5 (MT5)

## TYPE

Price-Action BOS Continuation

## TIMEFRAME

M5 – H1

## WEBSITE

[www.algotbot.live](http://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

**Inverted Gap Limit Continuation** is a pure price-action Expert Advisor that trades the *failure* of a fair-value gap. It uses **no technical indicators of any kind** — every level, filter, stop and target is derived from raw candle geometry. The only average it computes is a plain mean candle range, used inline to scale the minimum-gap filter to current volatility.

A fair-value gap (FVG) is a three-candle imbalance: a fast middle candle leaves an untraded void so that, for a bullish gap, the high of the oldest candle sits below the low of the newest candle. Most systems treat that void as support/resistance that *holds*. This strategy does the opposite — it trades the moment a void *fails*. When a bar **closes clean through a fresh gap** and that same close also **breaks structure** (takes out the most recent fractal swing), the imbalance is invalidated and “inverts”: a broken bullish gap becomes fresh **supply**, a broken bearish gap becomes fresh **demand**. The EA then trades *with* the breaking move (continuation), placing a passive limit order back inside the inverted void.

Three design choices make this distinct from a plain inversion-FVG system:

- **Structure gate** — a gap only inverts if the breaking close also clears the latest *fractal* swing (a k-bar pivot), tying every inversion to a genuine break of market structure rather than a rolling extreme or a body-size filter.

- **Resting limit** — instead of a market order on a confirmation candle, the EA parks a passive limit at a tunable depth inside the inverted void and lets price come to it, with structure-defined risk beyond the void's far edge.
- **Break-even trail** — once a fill runs a configurable multiple of risk in its favour, the stop is pulled to entry for active, hands-off protection.

## How It Works

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On every freshly-closed bar of the chart timeframe, the EA runs a five-step pipeline. All logic is candle geometry; nothing depends on a smoothing indicator.

### 1. Volatility scale

The EA sums the high–low range of the last `RangeLookback` candles and divides by the count to get a mean candle range. The minimum gap a fair-value gap must span is then `MinGapFactor × avgRange`, so the gap filter automatically adapts to the instrument's current volatility.

### 2. Fractal swing tracking (the structure gate)

Each bar, the EA confirms the single fractal pivot that just became eligible: a bar is a swing high/low if its high/low dominates the `SwingStrength` bars on *each* side. The most recent confirmed swing high and swing low are stored — these are the structure levels a breaking close must clear to validate an inversion.

### 3. Gap detection

From the last three closed bars (oldest, middle, newest) the EA records a fresh gap when an imbalance exists and its height clears the volatility filter:

- **Bullish FVG** — `High(oldest) < Low(newest)`, the middle candle is bullish, and the void height  $\geq$  `minGap`.
- **Bearish FVG** — `Low(oldest) > High(newest)`, the middle candle is bearish, and the void height  $\geq$  `minGap`.

Gaps are held in a small rolling list and expire after `FvgExpiry` bars if they never invert.

### 4. Inversion & entry logic

Iterating newest-to-oldest (so the freshest gap is preferred), the EA checks each tracked gap for a break-of-structure failure:

- **Broken bullish gap** → **SUPPLY**: the bar closes *below* the void *and* below the last swing low. The EA rests a **SELL-LIMIT** at `EntryDepth` into the inverted void.
- **Broken bearish gap** → **DEMAND**: the bar closes *above* the void *and* above the last swing high. The EA rests a **BUY-LIMIT** at `EntryDepth` into the inverted void.

A gap that inverts is consumed immediately, so the same gap can never be traded twice.

#### Worked example — inverted supply (sell)

A bullish FVG forms with its void between 1.10200 (bottom) and 1.10260 (top), a 60-point void. Several bars later a candle closes at 1.10150, below both the void and the last swing low → the gap inverts to supply. With

`EntryDepth = 0.50` the sell-limit rests at 1.10230 (mid-void). The stop sits above the void's far edge plus the buffer, and the take-profit is placed `RiskReward` × risk below entry.

## 5. Order placement, risk & targets

- **Entry:** a passive limit at `EntryDepth` into the void (0 = proximal/first-touch edge, 1 = distal/deepest edge).
- **Stop loss:** beyond the void's far edge by `StopBufferPct` of the void height — structure-defined risk.
- **Take profit:** a fixed `RiskReward` multiple of the entry-to-stop distance.
- **Broker distance check:** the order is only sent if both the risk and the entry-to-market gap satisfy the broker's minimum stop/limit distance.

## Position & order management

- **One at a time:** the EA never stacks a second pending order, and cancels any stray pendings while a position is open.
- **Limit ageing:** a resting limit is cancelled after `LimitExpiry` bars, or immediately if price *reclaims* the void (closes back above a sell zone / below a buy zone), invalidating the setup.
- **Break-even trail:** once an open trade runs `BreakEvenR` of its initial risk in profit, the stop is pulled to the entry price — done at most once per trade.

**Note:** The EA acts only on closed bars and manages a single setup at a time. This keeps behaviour deterministic between the C# backtest engine and the live MQL5 build, which share identical logic.

## Strategy in Action

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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.



## Parameters

Parameter	Default	Description
MinGapFactor	0.20	Minimum fair-value-gap height as a fraction of the mean candle range. Range 0.05–1.50, step 0.05. Higher = only wider, more significant gaps qualify.
RangeLookback	20	Number of bars used to compute the mean candle range (the volatility scale). Range 10–60, step 1.
SwingStrength	2	Fractal pivot strength — bars required on each side for a swing high/low to confirm. Range 1–5, step 1. Higher = stronger, rarer structure points.
EntryDepth	0.50	Depth of the resting limit into the inverted void (0 = proximal/first-touch edge, 1 = distal/deepest edge). Range 0.00–1.00, step 0.05.
StopBufferPct	0.25	Stop buffer beyond the void's far edge, as a fraction of the void height. Range 0.00–1.50, step 0.05.
RiskReward	2.0	Fixed reward-to-risk multiple used to place the take-profit. Range 1.0–6.0, step 0.5.
BreakEvenR	1.0	Move the stop to entry once the trade runs this many multiples of initial risk in profit (0 = disabled). Range 0.0–4.0, step 0.5.
FvgExpiry	20	Number of bars an un-inverted gap survives before it is dropped. Range 3–60, step 1.
LimitExpiry	12	Number of bars a resting limit survives before it is cancelled. Range 2–50, step 1.
Lots	0.10	Fixed trade volume in lots. Range 0.01–1.00, step 0.01.

**Magic number:** The EA also exposes a `Magic` input (default `8420`) used to tag and isolate its own orders and positions. Give each chart/instance a unique magic number if you run more than one EA on the same account.

## Recommended Settings

The defaults are tuned with FX majors, XAU and indices on M5–H1 in mind, but the EA is not locked to any timeframe — it runs on whatever primary timeframe the chart (or backtest) selects.

### STARTING POINT

- **Instruments:** liquid FX majors (EURUSD, GBPUSD), XAUUSD, or major index CFDs.

- **Timeframe:** M15 or H1 for a balance of setup frequency and noise; M5 produces more signals but demands tight spreads.
- **Risk per trade:** keep `Lots` conservative and size it to your account; the structure-defined stop varies per setup.

## TUNING GUIDANCE

- Raise `MinGapFactor` and `SwingStrength` on noisy instruments to demand cleaner gaps and stronger structure breaks.
- Lower `EntryDepth` toward 0 for first-touch fills (more fills, worse price); raise it toward 1 for deeper, more selective entries.
- Use `BreakEvenR = 1.0` as a starting protective trail; set it to 0 to disable break-even management entirely.
- Shorten `LimitExpiry` if you only want fills shortly after the structure break; lengthen it to allow slower retraces.

**Tip:** Always validate any parameter set on out-of-sample data and a demo account before committing real capital. The optimiser ranges in the table above define sensible search bounds.

## How to Install on MetaTrader 5

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- 1 Copy `InvertedGapLimitContinuation.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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