

Imbalance Magnet Reversal

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Mean Reversion / Structure Reversal	M15 (any timeframe supported)	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

Imbalance Magnet Reversal is a pure price-action Expert Advisor that uses **no indicators of any kind** — no moving averages, RSI, ATR, Bollinger Bands, or anything else. It reads raw market geometry directly from closed candles and marries two well-known footprints in a way that inverts the usual "trade the gap" playbook.

The EA combines:

- **Swing support / resistance** — horizontal levels harvested from confirmed fractal pivots (a high or low that tops or bottoms a set number of bars on *both* sides). These are the structural ceilings and floors the market reacts to. Because they are built only from closed bars, they **never repaint**.
- **Fair Value Gaps (imbalances)** — a three-candle vacuum where the middle candle moves so fast that candle #1 and candle #3 leave an untraded price pocket. Markets are statistically drawn back to *fill* these voids.

Most FVG systems *enter inside* the gap. Here the gap is not the entry — it is the **magnet**. The entry is a clean **rejection** off a swing level: a candle whose wick pierces the level but whose body closes back on the safe side, proving the level held. The EA then fades that level toward the nearest still-*unfilled* imbalance lying in the trade direction, because that open void is where liquidity wants to travel.

Entry = structure rejection. Target = the imbalance it is drawn to. Stop = just beyond the rejected level.

Every threshold (touch zone, stop buffer, minimum gap size) is scaled by a plain mean candle range computed inline from raw highs and lows, so the system adapts to any symbol or volatility *without ever needing the point size*. It runs on whatever symbol and timeframe the chart provides.

How It Works

1. Volatility Scale

On every freshly-closed bar the EA measures a plain **mean candle range** across the lookback window (`SrLookback` bars). All structural thresholds are expressed as fractions of this average range, so the same settings behave consistently on EUR/USD, XAU/USD, indices, or any other liquid instrument:

```
avgRange = mean(High - Low) over SrLookback bars
zone     = TouchZoneFrac  × avgRange  (wick "touch" tolerance)
buffer   = StopBufferFrac × avgRange  (stop offset)
minGap   = MinGapFrac    × avgRange  (minimum gap height)
```

2. Harvesting Swing Levels

The EA scans the lookback window for confirmed fractal pivots. A bar centred at shift s becomes a **swing high** (resistance) if its high tops every bar within `PivotLeg` on both sides, and a **swing low** (support) if its low bottoms them. Only closed bars are used, so these levels are fixed once printed and never repaint.

3. Detecting the Magnet (Unfilled Fair Value Gap)

Looking back `GapLookback` bars, the EA inspects each three-candle window for an imbalance — where the older candle's high is below the newer candle's low (a **bullish gap**) or the older candle's low is above the newer candle's high (a **bearish gap**). A gap qualifies only if its height is at least `minGap` and no later closed bar has traded fully through it (i.e. it is still **unfilled**).

4. Entry Logic

The EA acts **once per freshly-closed bar**, holds **one position at a time** per magic number, and skips entries when the spread exceeds `MaxSpreadPoints`. The just-closed candle is the signal candle:

- **SHORT** — a bearish candle (close below open) whose wick pushed *up* into a swing **resistance** (within the touch zone) but whose body closed back *below* it. The ceiling held → sell the rejection. The EA selects the *lowest* qualifying resistance — the first ceiling above the close, i.e. the one that actually capped the candle.

- **LONG** — the mirror image: a bullish candle (close above open) whose wick pushed *down* into a swing **support** but whose body closed back *above* it. The floor held → buy the rejection. The EA selects the *highest* qualifying support — the first floor below the close.

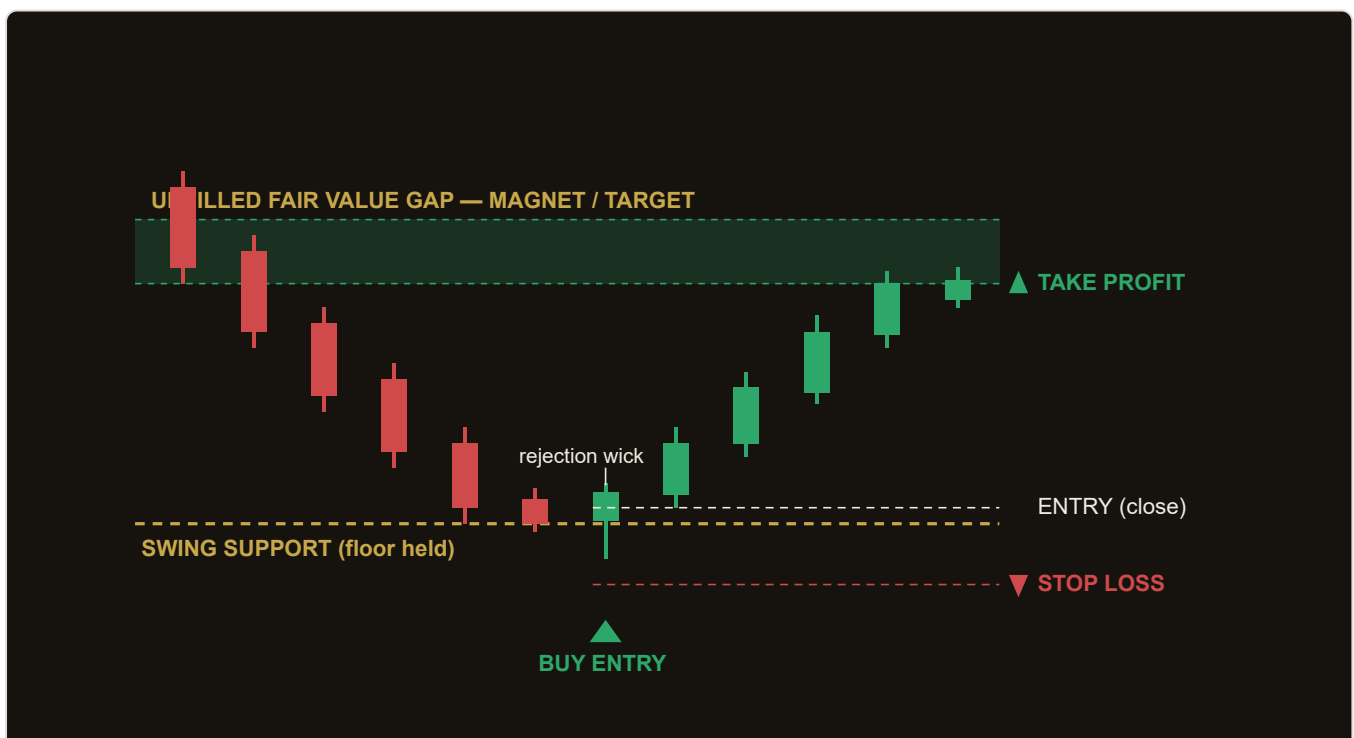
5. Stop Loss, Take Profit & Reward:Risk Filter

- **Stop loss** — placed just beyond the rejected level *and* the signal candle's extreme, plus the volatility buffer. For shorts: $\max(\text{level}, \text{candle high}) + \text{buffer}$. For longs: $\min(\text{level}, \text{candle low}) - \text{buffer}$.
- **Take profit** — the near edge of the nearest unfilled gap in the trade direction (the lower edge for a long target above price; the upper edge for a short target below price). This is the magnet the trade is drawn to.
- **Reward:Risk filter** — the setup is taken only if the distance to the magnet divided by the risk to the stop is at least MinRewardRisk . Otherwise the signal is skipped.

Why this works: structure tells you *where* price is likely to reverse, and the open imbalance tells you *where it wants to go next*. The rejection candle is the trigger that confirms the structural level held before committing.

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. It depicts a **long** setup: price wicks down into a swing support floor and closes back above it, triggering a buy that targets the nearest unfilled gap above.



Illustrative example only. Actual market behaviour varies.

Reading the chart

Price drifts down and the signal candle spikes *through* the swing support but its body closes back above the level (the floor held). The EA buys at that close, places the stop just below the level and the candle's low, and sets the take profit at the lower edge of the unfilled fair value gap above — the magnet price is drawn to fill. The trade is only taken if that reward-to-risk ratio meets `MinRewardRisk`.

Parameters

Parameter	Default	Description
Lots	0.10	Order volume in lots. Range 0.01–1.00, step 0.01.
PivotLeg	3	Bars required on each side to confirm a fractal swing pivot (the support / resistance levels). Range 2–8, step 1. Higher values yield fewer, stronger levels.
SrLookback	60	How many recent closed bars to scan for swing levels and the volatility scale. Range 20–200, step 10.
TouchZoneFrac	0.15	How close (as a fraction of mean candle range) the wick must come to a level to count as a "touch". Range 0.02–1.00, step 0.01.
GapLookback	40	How many recent closed bars to scan for an unfilled magnet gap. Range 6–150, step 2.
MinGapFrac	0.25	Minimum gap height as a fraction of mean candle range (rejects noise gaps). Range 0.05–1.50, step 0.05.
StopBufferFrac	0.15	Stop buffer beyond the rejected level / signal-candle extreme (fraction of range). Range 0.00–1.00, step 0.05.
MinRewardRisk	1.00	Minimum reward:risk to the magnet target; below this the setup is skipped. Range 0.30–5.00, step 0.10.
MaxSpreadPoints	100	Skip entries when the spread (in points) is wider than this. Range 5–300, step 5.
Magic	7340	Magic number identifying this EA's positions. Range 0–9,999,999, step 1.

Recommended Settings

The strategy was built with **EUR/USD** or **XAU/USD** on the **M15** timeframe in mind, but because every threshold is volatility-scaled it works on any liquid instrument and timeframe the chart provides.

STARTING POINT

- **Symbol / Timeframe:** EUR/USD or XAU/USD, M15.
- **PivotLeg:** 3 for responsive structure; raise to 4–5 for fewer, higher-conviction levels.
- **SrLookback / GapLookback:** keep defaults (60 / 40) initially; widen on higher timeframes where setups are sparser.
- **MinRewardRisk:** 1.00 as a baseline. Increase toward 1.5–2.0 to demand more favourable targets at the cost of fewer trades.
- **MaxSpreadPoints:** tune to your broker. On XAU/USD and during news the default of 100 may be too tight or too loose — verify against your symbol's typical spread.

Tip: Always run the Strategy Tester on your own broker's historical data before going live. Optimise `PivotLeg`, `MinGapFrac`, and `MinRewardRisk` together — they jointly control how often a clean structure-to-imbalance setup qualifies.

How to Install on MetaTrader 5

- 1 Copy `ImbalanceMagnetReversal.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 `ImbalanceMagnetReversal.mq5` source, place it in the same `Experts` folder and compile it in MetaEditor (press **F7**) to produce the `.ex5` file.

Risk Warning

Trading foreign exchange, CFDs, and other leveraged financial instruments involves substantial risk of loss and is not suitable for all investors. The strategies and tools described in this document are provided for **educational purposes only** and do not constitute financial advice, investment recommendations, or solicitation to trade. Always consult a qualified financial adviser before making trading decisions. Past backtest performance is not indicative of future results.