

Order Block Liquidity Reversal

Expert Advisor Documentation

PLATFORM

MetaTrader 5 (MT5)

TYPE

Order Block / Liquidity Reversal (ICT)

TIMEFRAME

M15 – H1

WEBSITE

www.algotbot.live

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Overview

Order Block Liquidity Reversal is a pure price-action Expert Advisor built on the core ideas of ICT (Inner Circle Trader) "smart money" methodology. It uses **no indicators of any kind** — there are no moving averages, oscillators, or volatility filters anywhere in the logic. Every decision is derived from raw candle structure: swing pivots, breaks of structure, liquidity sweeps, and order blocks.

The strategy waits for the market to do four specific things in sequence before it commits to a trade: build a swing, sweep liquidity beyond a prior swing (a stop-hunt), break structure with an energetic displacement move, and finally retrace back into the originating *order block*. Entry is taken only on a confirmed rejection of that zone, with a stop placed just beyond the block and a fixed reward-to-risk target. Long and short setups are perfect mirrors of one another.

What is an order block? An order block is the last opposite-colour candle before an explosive move — for a long, the last *down-close* candle before a strong rally. Smart-money theory treats the candle's full range [Low, High] as a zone of unfilled institutional orders that price often revisits before continuing.

How It Works

The EA operates strictly on closed bars — it evaluates its logic **once per new bar**, never intrabar. On every bar close it runs a fixed pipeline: detect swings → detect structure breaks and form zones → manage entries → age and expire stale zones.

1. Swing detection (fractal pivots)

A confirmed swing high is a bar whose high is strictly above the highs of the `SwingLookback` bars on either side of it; a swing low is the mirror. Because confirmation needs bars on both sides, a pivot is only registered after `SwingLookback` additional bars have closed. These confirmed swings become the reference levels for structure breaks and liquidity sweeps.

2. Break of structure (BOS)

A **bullish** break of structure occurs when a bar *closes above* the most recent confirmed swing high. A **bearish** BOS is a close below the most recent confirmed swing low. A break of structure is the trigger that attempts to construct a fresh order-block zone, after which the consumed swing list is cleared so a new swing must form before another BOS can fire.

3. Order-block origin

On a bullish BOS the EA looks back (up to 12 bars) for the **last down-close candle before the up-move** — that candle becomes the bullish order block, and its `[Low, High]` defines the zone. The short side mirrors this using the last up-close candle before a down-move.

4. Displacement filter

The leg out of the block must be *energetic*. At least one bar in the impulse leg must have a range that exceeds `DisplacementMult` × the average range of the 10 bars preceding the block. This raw price-action filter rejects sluggish, low-conviction breaks. No volatility indicator is used — only candle ranges.

5. Liquidity sweep (the ICT signature)

The block is only validated if it first **swept liquidity**: for a long, the block's low must have traded *below* the prior swing low — evidence that the move ran resting stop orders (a stop-hunt) before reversing. Without this sweep the zone is discarded. This is the defining feature that separates an order block reversal from an ordinary pullback.

6. Entry — retrace and rejection

Once a valid zone exists, the EA waits for price to retrace back **into the block**. For a long it requires two things on the same closed bar:

- **Tap:** the bar's low penetrates the zone by at least `ZonePenetration` of the block's height.
- **Rejection:** the bar closes *above* the block low *and* closes bullishly (close > open).

When both are true, a market **buy** is sent. Only **one position at a time** is allowed per symbol/magic. If price instead closes beyond the block (below the block low for a long), the zone is considered violated and discarded.

Exit logic — Stop Loss & Take Profit

Risk is defined entirely by the order block. The stop is placed beyond the zone, buffered by a fraction of the block height, and the target is a fixed multiple of that risk distance:

```
// Long
risk      = Entry - StopLoss
StopLoss  = BlockLow - StopBufferFrac * BlockHeight
TakeProfit = Entry      + RewardMultiple * risk

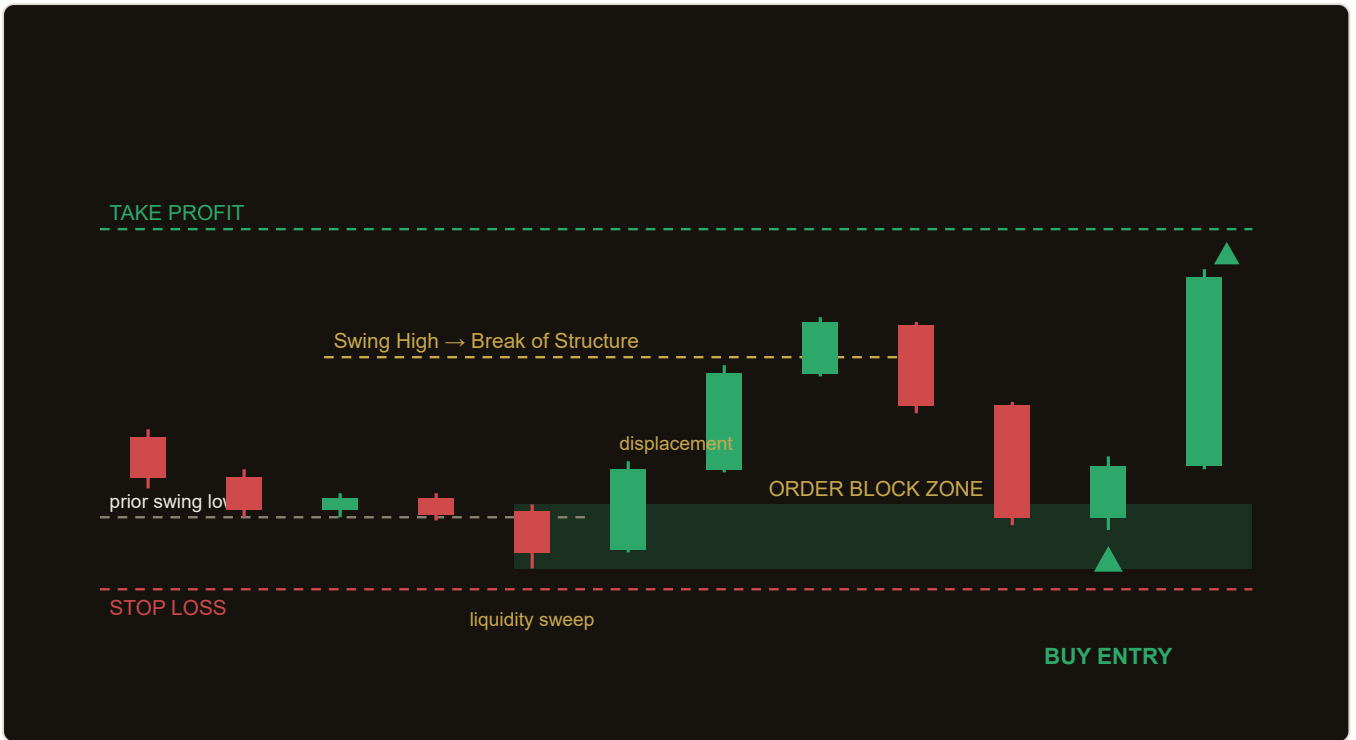
// Short (mirror)
risk      = StopLoss - Entry
StopLoss  = BlockHigh + StopBufferFrac * BlockHeight
TakeProfit = Entry      - RewardMultiple * risk
```

Both SL and TP are attached to the order at entry, so trades are managed entirely by the broker thereafter — there is no trailing stop or break-even logic. A zone that is never tapped simply **expires** after `ZoneExpiryBars` bars.

One bar, one decision. The EA acts only on a brand-new bar and reads the just-closed bar at shift 1. The MQL5 build is a faithful, behaviourally identical translation of the C# reference implementation — the swing lists are represented by their size plus most-recent element because that is all the logic ever reads.

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. Price sweeps the prior swing low, displaces upward to break structure, retraces into the order block, and triggers a long on the bullish rejection — stop below the block, target at the reward multiple.

Parameters

Parameter	Default	Description
SwingLookback	3	Bars required on each side of a fractal pivot to confirm a swing high/low. Higher = fewer, more significant swings. Range 2–6, step 1.
DisplacementMult	1.6	The impulse leg must contain at least one bar whose range exceeds this multiple of the average range before the block. Higher = stricter, more explosive breaks only. Range 1.0–3.0, step 0.1.
ZonePenetration	0.5	Fraction of the order-block height that price must retrace into before an entry can trigger. 0.5 = price must tap at least halfway into the zone. Range 0.1–1.0, step 0.1.
StopBufferFrac	0.3	Extra stop distance beyond the block, as a fraction of the block height. Larger = more breathing room but wider risk. Range 0.0–1.0, step 0.1.
RewardMultiple	2.0	Take-profit distance as a multiple of the risk (entry-to-stop) distance. 2.0 = a 1:2 reward-to-risk target. Range 1.0–4.0, step 0.5.
ZoneExpiryBars	24	Maximum number of bars an untapped order-block zone stays active before it expires. Range 6–60, step 6.
Lots	0.10	Fixed trade volume in lots for every position. Range 0.01–1.0, step 0.05.
Magic	720144	Unique magic number identifying this EA's positions, so it manages only its own trades.

Recommended Settings

Because the logic is built on swing structure and order blocks, it works best where candles form clean impulses and pullbacks. Intraday timeframes on liquid instruments give the cleanest sweeps.

- **Symbols:** Major FX pairs (EUR/USD, GBP/USD, USD/JPY) and major indices / gold (XAU/USD).
- **Timeframe:** M15 to H1. Lower timeframes produce more setups but noisier sweeps; H1 gives fewer, higher-quality zones.
- **Reward target:** Keep `RewardMultiple` at 2.0–3.0 to let the asymmetric payoff carry the strategy.
- **Selectivity:** Raise `DisplacementMult` toward 2.0+ and `SwingLookback` to 4–5 for fewer, stronger signals in trending conditions.

Example configuration — EUR/USD M15

SwingLookback = 3, DisplacementMult = 1.8, ZonePenetration = 0.5, StopBufferFrac = 0.3, RewardMultiple = 2.0, ZoneExpiryBars = 24, Lots = 0.10. This waits for a clearly displaced break, requires a half-zone tap with a bullish/bearish rejection, and targets twice the risk.

Tip — always backtest first. Run the Strategy Tester across several months of data on your exact broker and symbol before going live. Order-block behaviour is sensitive to spread and tick quality, so optimise `DisplacementMult` and `RewardMultiple` on your own data — the defaults are a starting point, not a guarantee.

How to Install on MetaTrader 5

- 1 Copy `OrderBlockLiquidityReversal.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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