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Quasimodo Pattern Swing Reversal

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Price-Action Reversal	H1 / H4 (single timeframe)	www.algobot.live

Overview

The **Quasimodo Pattern Swing Reversal** is a price-action reversal Expert Advisor built around the Quasimodo (QM), also known as the "over-and-under" pattern. It looks for the moment a trending swing structure fails and traps late participants, then positions for the reversal at the unmitigated level that was left behind.

In its bearish form, the pattern is composed of a **left-shoulder high**, followed by a higher **head high**, after which price breaks the low that sits between the two swings — a **break of structure (BOS)**. That break signals the up-move has lost control. The EA then waits for price to retrace back up into the left-shoulder high, which now behaves as an **unmitigated supply level**, and sells the reversal with a protective stop placed above the head. The bullish variant mirrors this exactly at a lower head-low, buying the retrace back into the left-shoulder low.

Swing points are located objectively with **5-bar fractals**, and both the stop-loss and take-profit are sized from the **Average True Range (ATR)**, so the EA adapts its risk to prevailing volatility. It operates on a single timeframe only and evaluates its logic once per newly closed bar.

> **Core idea:** A Quasimodo forms when a fresh trend high (or low) is immediately invalidated by a break of the prior swing. The retrace back to the shoulder is a high-probability rejection zone because that level was never "used up" during the failed extension.

How It Works

1. Building the swing window

On each new bar the EA appends the most recently **closed** bar to a rolling in-memory window and trims it to a fixed capacity. It requires a minimum of `max(SwingScan, AtrPeriod + 1) + 6` bars before it will evaluate any setup, guaranteeing there is always enough history for both fractal detection and the ATR calculation.

2. Locating the swings (5-bar fractals)

Within the most recent `SwingScan` bars, the EA scans from newest to oldest for 5-bar fractals. A **fractal high** is a bar whose high is strictly greater than the two bars on each side of it; a **fractal low** is the mirror. The two most recent fractal highs become the **head** (newer) and the **left shoulder** (older); the two most recent fractal lows serve the bullish case.

3. Confirming the pattern & break of structure

Bearish QM requires the head high to be above the shoulder high. The EA then measures the lowest low between the shoulder and the head (the "neckline"), and confirms a **break of structure** only if a bar *after* the head closes below that neckline.

Bullish QM is the exact mirror: the head low must be below the shoulder low, and structure breaks when a bar after the head closes above the highest high between the swings.

4. The entry (tag of the shoulder)

Once structure has broken, the EA waits for price to retrace back into the shoulder level. For a short, the current bar must trade up to within a tolerance of the shoulder high yet close back below it:

```
tol = TagAtrFrac × ATR
Bearish tag:  High ≥ shoulderHigh − tol   AND   Close < shoulderHigh
Bullish tag:  Low  ≤ shoulderLow  + tol   AND   Close > shoulderLow
```

The tolerance (a fraction of ATR) lets the "tag" register even if price does not touch the exact level, while the close requirement filters out bars that break clean through it.

5. Stop-loss & take-profit (ATR based)

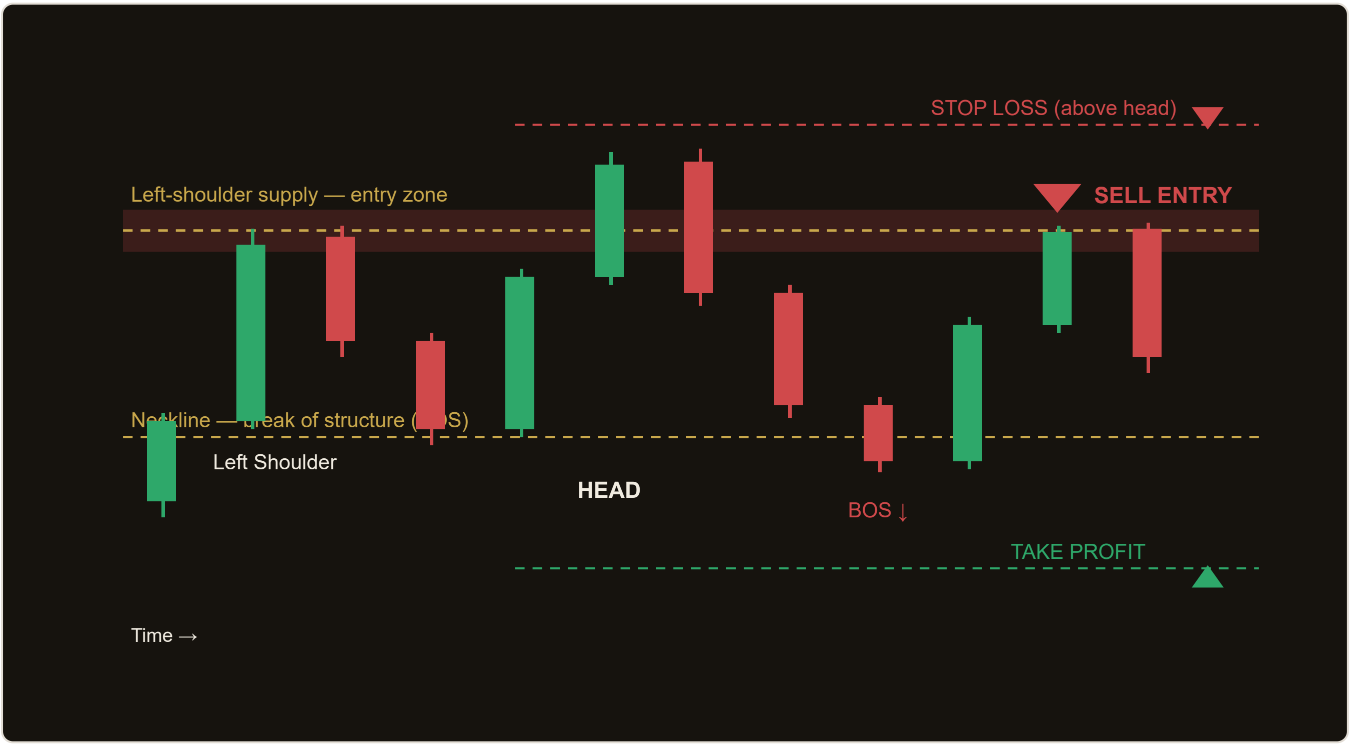
- **Short:** entry at the Bid, stop-loss at `headHigh + AtrSlMult × ATR` (above the head), take-profit at `entry − AtrTpMult × ATR`.
- **Long:** entry at the Ask, stop-loss at `headLow − AtrSlMult × ATR` (below the head), take-profit at `entry + AtrTpMult × ATR`.

A sanity check ensures the computed stop is on the correct side of the entry price before any order is sent.

> **One position at a time:** The EA will not open a new trade while a position with its magic number is already open on the symbol, and it only acts once per newly formed bar — never intrabar.

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 **bearish Quasimodo**: a left shoulder, a higher head, a break of the neckline, and the reversal short taken on the retrace back into the shoulder.



Illustrative example only. Actual market behaviour varies.

Parameters

Parameter	Default	Description
SwingScan	`50`	Number of bars back to scan for the fractal swing highs/lows. Range 20–150, step 5. Larger values detect broader, slower structures; smaller values react to tighter, faster swings.
TagAtrFrac	`0.2`	Tolerance for tagging the shoulder level, expressed as a fraction of ATR. Range 0.0–1.0, step 0.05. Higher values let price register a "tag" without touching the exact level.
AtrPeriod	`14`	Averaging period for the ATR used to size the tag tolerance, stop-loss, and take-profit. Range 7–30, step 1.
AtrSlMult	`0.5`	ATR multiple added beyond the head to place the protective stop-loss. Range 0.1–2.0, step 0.1. Larger values give the trade more room but increase risk per trade.
AtrTpMult	`2.5`	ATR multiple used to project the take-profit from the entry price. Range 1.0–6.0, step 0.5. Sets the reward side of the trade.
Lots	`0.10`	Fixed order volume in lots. Range 0.01–1.0, step 0.05. Size this to your account balance and risk tolerance.
Magic	`5118`	Unique magic number identifying this EA's positions. Keep distinct per EA/chart so position management does not collide with other Experts.

Recommended Settings

The Quasimodo pattern is a swing-structure setup, so it is best suited to timeframes where swings are meaningful and noise is manageable.

- **Symbols:** Major FX pairs (e.g. EURUSD, GBPUSD, USDJPY) and liquid indices/metals with clean swing structure and tight spreads.
- **Timeframe:** H1 or H4. Lower timeframes produce more, but noisier, fractal swings; higher timeframes produce fewer, more reliable ones.
- **Reward/risk:** The default `AtrSlMult 0.5` / `AtrTpMult 2.5` targets an asymmetric payoff. Widen `AtrSlMult` on volatile symbols if stops are being clipped by noise.
- **Swing scan:** Start at the default `SwingScan 50`. Increase toward 100–150 on higher timeframes to require broader, more significant structure.

Example starting configuration (EURUSD, H1)

SwingScan = 50, TagAtrFrac = 0.2, AtrPeriod = 14, AtrSlMult = 0.5, AtrTpMult = 2.5, Lots = 0.10. Always backtest and forward-test on a demo account across a range of market conditions before committing real capital.

Tuning tip: If entries feel too rare, raise `TagAtrFrac` slightly so the shoulder tag registers more readily. If too many entries fail immediately, tighten `TagAtrFrac` and confirm the break of structure is genuine on the chart.

How to Install on MetaTrader 5

1. Copy `QuasimodoPatternSwingReversal.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

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.