Order Block Optimized – Indicator for Automatic Order Block Detection on MT4

Introduction

In the context of algorithmic trading and institutional analysis, the accurate identification of *Order Blocks* represents one of the most advanced methods for locating high-probability price reaction zones. Order Blocks are market areas where large institutional participants are believed to have executed accumulation or distribution orders, generating significant price movements. These zones are frequently used by traders to anticipate pullbacks or reversals, as they tend to act as dynamic support or resistance levels.

The Order Block approach is distinguished by its ability to capture the internal structure of the market, going beyond the delayed signals of conventional indicators. The underlying logic is based on identifying the last bearish candle before a significant bullish movement (for a bullish Order Block), or vice versa, followed by a breakout in the direction of the move.

The *Order Block Optimized* indicator for MetaTrader 4 is designed to automate the detection of Order Blocks, applying strict validation criteria based on volatility (measured through the Average True Range), candle structure, and breakout confirmation within a defined number of subsequent candles. The algorithm is intended as a technical tool for traders who adopt advanced price action approaches, Smart Money Concepts (SMC), and institutional trading models.

This report provides a detailed explanation of the indicator's functionality, the implemented logic, and its practical trading applications.

Core Functionality of the "Order Block Optimized" Indicator

The *Order Block Optimized* indicator has been developed to systematically identify key market areas where bullish or bearish Order Blocks are likely to occur. The primary objective is to highlight zones marked by a strong impulse move, supported by volatility, and confirmed by directional continuation within a limited number of subsequent candles. The implemented logic is based on three core components: candle range analysis, a volatility filter using the Average True Range (ATR), and breakout validation.

The `Lookback` parameter defines the depth of historical analysis, i.e., the maximum number of previous bars to be examined. The candle range is calculated as the difference between the high and low of each bar and is compared to a threshold value based on the ATR multiplied by a scaling factor (`ATR_Multiplier`). This filter ensures that only wide-range candles, which typically indicate impulsive movements, are considered.

The indicator then checks whether a breakout occurs within the next `BreakoutCandles` following the candidate candle. In the case of a bullish Order Block, the high of the candle must be exceeded. Conversely, for a bearish Order Block, the low must be broken. This approach reduces false signals, confirming only the areas that produced a genuine directional continuation.

When all criteria are met, the indicator saves the relevant level (the low for a bullish OB, the high for a bearish OB) and stores it in the respective buffers (`BullishOB` and `BearishOB`). These levels are plotted on the price chart using directional arrows: yellow for bullish OBs and orange for bearish OBs.

Buffer updates are incremental: each new valid OB overwrites the previous one, keeping only the latest value displayed on the chart. This ensures a clean visual layout while maintaining a reliable and up-to-date operational reference.

Calling the Indicator from MQL4 Code

To integrate the indicator within an Expert Advisor or script, the `iCustom` function can be used as follows:

```
    double newOrderBlockHigh = iCustom(NULL, 0, "Order Block
Optimized", Lookback, ATR_Multiplier, BreakoutCandles, 1, 1);

    double newOrderBlockLow  = iCustom(NULL, 0, "Order Block
Optimized", Lookback, ATR_Multiplier, BreakoutCandles, 0, 1);
```

The `1` or `0` in the buffer argument selects the bearish or bullish Order Block buffer, respectively. The second `1` refers to the value of the current or a previous candle, depending on operational requirements.

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