

Session Open Drive Breakout

Expert Advisor Documentation

PLATFORM

MetaTrader 5 (MT5)

TYPE

Opening-Range Breakout (Price Action)

TIMEFRAME

M15 – H1

WEBSITE

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

Session Open Drive Breakout is a pure price-action Expert Advisor built on one of the most reliable intraday observations in the market: when a major trading session opens — London at roughly 07:00 UTC, for example — the first handful of bars carve out a tight *opening range*, and the first decisive expansion out of that range tends to set the directional drive for the rest of the session.

The EA uses **no indicators of any kind** — no moving averages, no RSI, no ATR. The entire edge comes from time-anchored structure: it watches the session open, measures the opening range from raw highs and lows, then trades the first clean breakout. Because the entry buffer and the protective stop are both expressed as a **fraction of the range** rather than fixed points, the strategy is point-size and timeframe agnostic and adapts automatically to whatever symbol and timeframe the backtest selects.

It takes at most **one trade per day**, only inside a defined session window, with a structural stop and a fixed reward-to-risk target. The natural home for the strategy is an intraday FX major or index — such as EURUSD, GBPUSD, or US30 — on the M15 to H1 timeframes, where session opens produce clean, tradable directional drives.

Why no indicators? Indicators lag price because they are derived from it. By anchoring entirely to session time and raw price structure, Session Open Drive Breakout reacts to the breakout itself rather than to a smoothed echo of it — and it has no parameters to over-fit beyond the session geometry.

How It Works

The EA maintains a small block of per-day session state that is wiped clean at the start of every new UTC calendar day. Within each day, a trading session unfolds in two distinct phases.

Phase 1 — Build the Opening Range

- Bars that close **before** `SessionStartHour` are ignored entirely.
- The first `RangeBars` bars at or after the session start build the **opening range** — the EA tracks the running high and the running low across those bars.
- No trade is ever taken while the range is still forming. Once `RangeBars` bars have been counted, the range high and low are **locked** for the day.

Phase 2 — Hunt the Breakout

With the range locked, the EA scans each newly-closed bar for the first decisive break beyond it. A small **buffer** — `BreakBufferFrac` times the range size — filters out marginal pokes through the boundary.

- **Long:** triggered when a bar *closes* above `rangeHigh + buffer`.
- **Short:** triggered when a bar *closes* below `rangeLow - buffer`.

Only the **first** qualifying breakout is taken, and only while the current hour is inside the `[SessionStartHour, SessionEndHour)` window. After a trade is opened the EA stands down for the rest of the day (`tradedToday` is set); any open position simply rides on its stop-loss and take-profit.

Stop-Loss & Take-Profit

Risk is defined by the structure of the range itself, not by an arbitrary point distance:

- **Stop-Loss** sits just past the *opposite* side of the opening range — `rangeLow - buffer` for a long, `rangeHigh + buffer` for a short. A failed breakout that snaps back through the entire range is the invalidation signal.
- **Take-Profit** is placed at a fixed multiple of that stop distance, set by `RewardRatio` (default 2.0×). The risk distance is measured from the live entry price to the stop, then projected out by the reward ratio.

Worked example (long breakout)

Opening range locks with `rangeHigh = 1.10250` and `rangeLow = 1.10050` → range = 200 points. With `BreakBufferFrac = 0.05`, the buffer is 10 points. A bar closes at 1.10290 (above $1.10250 + 10$ pts) →

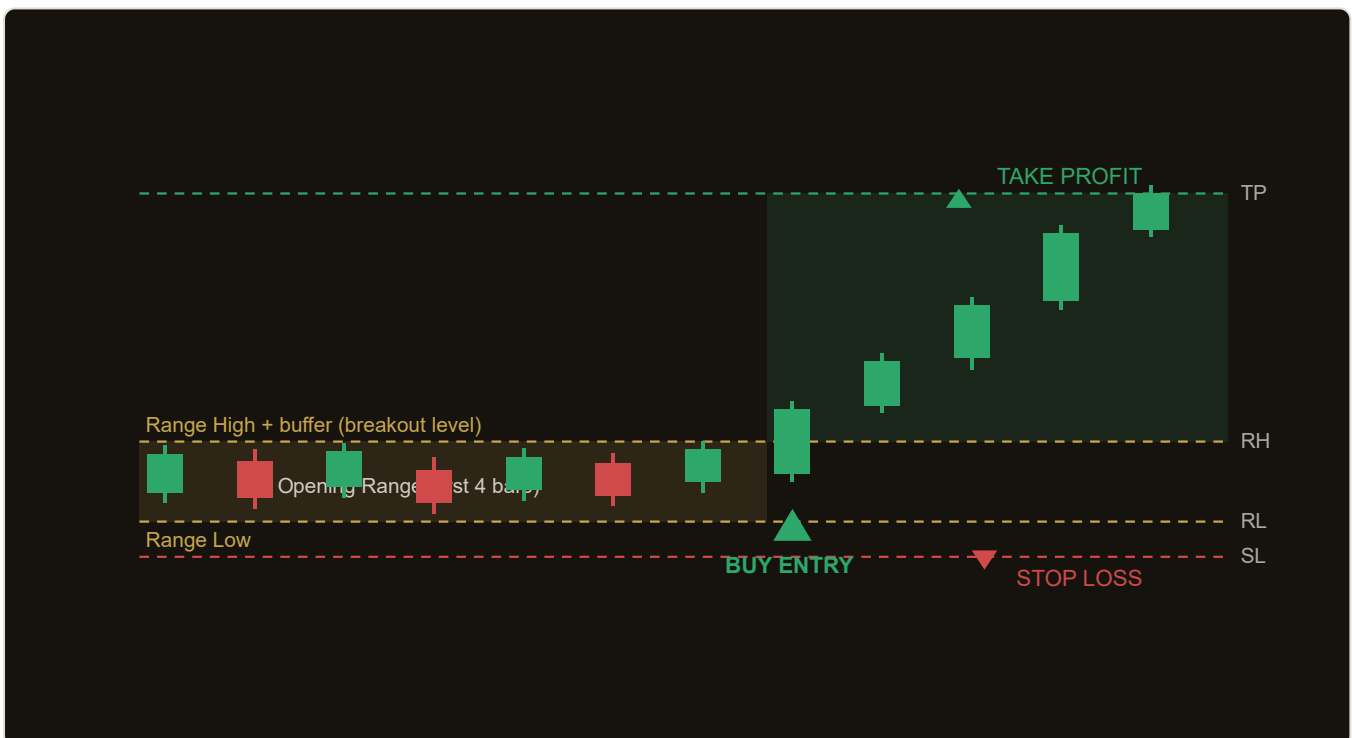
long entry

. The stop is placed at `rangeLow - buffer = 1.10040`. If the entry fills at 1.10300, risk = 26 points, so with `RewardRatio = 2.0` the take-profit sits 52 points away at 1.10352.

Server-time note. The C# research engine keys the session off bar `TimeUtc`. In MetaTrader 5, bar times (`iTime`) are reported in the broker's server time, so `SessionStartHour` and `SessionEndHour` are interpreted in server time. If your broker's server clock is not UTC, shift the hour inputs by the broker's UTC offset to reproduce identical behaviour.

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.

Parameters

Parameter	Default	Description
SessionStartHour	7	UTC/server hour at which the opening range begins to form (7 = London open). Range: 0–23, step 1.
RangeBars	4	Number of bars from the session start used to build the opening range. No trading occurs while these bars are counted. Range: 1–12, step 1.
SessionEndHour	16	UTC/server hour after which no <i>new</i> trades are opened; existing positions continue to ride on their SL/TP. Range: 1–24, step 1.
BreakBufferFrac	0.05	Breakout and stop buffer, expressed as a fraction of the opening-range size. Filters marginal pokes through the boundary. Range: 0.00–0.50, step 0.01.
RewardRatio	2.00	Take-profit distance as a multiple of the structural stop distance (reward-to-risk). Range: 1.00–6.00, step 0.50.
Lots	0.10	Fixed order volume in lots. Range: 0.01–1.00, step 0.05.
Magic	8801	EA magic number used to identify and manage this strategy's own positions. Range: 0–9,999,999, step 1.

Recommended Settings

Session Open Drive Breakout is designed for liquid intraday instruments where session opens produce clean directional expansion. The defaults are tuned for the London open, but the session hours should always be matched to your broker's server clock.

SYMBOLS & TIMEFRAMES

- **Symbols:** intraday FX majors (EURUSD, GBPUSD) or major indices (US30, GER40). These produce the cleanest session-open drives.
- **Timeframes:** M15 to H1. Lower timeframes give more granular opening ranges; H1 gives broader, more deliberate ranges with fewer false breaks.

TUNING GUIDANCE

- **Session window:** set `SessionStartHour` to your target session open in *server* time. For the New York open instead of London, raise it accordingly and adjust `SessionEndHour` to close the trade window before the session winds down.
- **Range definition:** a smaller `RangeBars` reacts faster but to a noisier range; a larger value waits for a more established range at the cost of a later entry.

- **Selectivity:** raise `BreakBufferFrac` to demand a more decisive break (fewer, higher-conviction signals); lower it to enter earlier.
- **Targets:** `RewardRatio = 2.0` is a balanced default. Higher ratios let winners run further but reduce hit rate.

Always validate before going live. Run the EA in the MT5 Strategy Tester across multiple years and on a demo account first. Confirm the session hours line up with your broker's server time before committing real capital.

How to Install on MetaTrader 5

- 1 Copy `SessionOpenDriveBreakout.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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