

Previous Day Range Breakout

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Breakout	M15 / M30	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

Previous Day Range Breakout is a classic intraday breakout Expert Advisor built around the single most-watched pair of levels in day trading: **yesterday's high** and **yesterday's low**. Together those two prices bracket the entire prior session's auction. As long as price stays between them, the market is in balance. A decisive close beyond either rail signals that price has broken out of that balance and is trending into fresh territory — and that is where this EA looks to enter.

The strategy is fully self-contained on a single timeframe. It never reads a second (daily) timeframe. Instead, the “day” is reconstructed directly from the primary bars' own UTC calendar date: each newly-closed bar extends the current day's running high and low, and when the calendar date rolls over, the day that just finished is frozen as the “previous day” whose high and low become the breakout rails for the new session. This makes it genuine previous-day-range tracking on whatever timeframe you attach it to.

Every stop and target is scaled to **ATR (Average True Range)**, so the EA adapts automatically to any symbol or volatility regime with no hard-coded point sizes. It is a mirror-image system: long on an upside break of the prior high, short on a downside break of the prior low.

How It Works

Reconstructing the “previous day”

The EA processes one signal per newly-closed primary bar (a new-bar check gates all logic). The bar that just closed — shift `1` — is the range-building and signal bar. Its calendar date is compared against the day currently being built:

- If the date is unchanged, the bar simply extends the current day's running **High** and **Low**.
- If the date has rolled over, the day that just finished is frozen: its High becomes `PrevDayHigh` and its Low becomes `PrevDayLow`. A new day begins, and the per-side trade counters reset.

No trades are considered until at least one full previous day has been captured.

Entry logic

Once a previous day exists and enough bars are available for the ATR calculation, the EA evaluates the just-closed bar's close against the frozen rails, cushioned by a small confirmation **buffer** (a fraction of ATR) that filters out marginal pokes which merely tag the level and fall back inside the range:

```
buffer = BreakoutBufferAtr × ATR
risk   = AtrStopMult      × ATR

LONG   if close > PrevDayHigh + buffer    → upside breakout, enter at Ask
SHORT  if close < PrevDayLow  - buffer    → downside breakout, enter at Bid
```

The two sides are exact mirror images. A long entry uses the current **Ask**; a short entry uses the current **Bid**.

Exit logic — ATR-scaled stop & target

Both the stop loss and the take profit are placed at order-submission time and are sized entirely from ATR — there is no trailing stop or time-based exit:

- **Stop loss** = `AtrStopMult × ATR` beyond the entry (below for longs, above for shorts).
- **Take profit** = `RewardRatio ×` that stop distance, in the direction of the trade.

With the defaults (`AtrStopMult = 1.5` , `RewardRatio = 1.8`) each trade risks $1.5 \times \text{ATR}$ to target $2.7 \times \text{ATR}$ — a reward-to-risk of 1.8. The position then simply runs until either the stop or the target is hit.

Trade management & filters

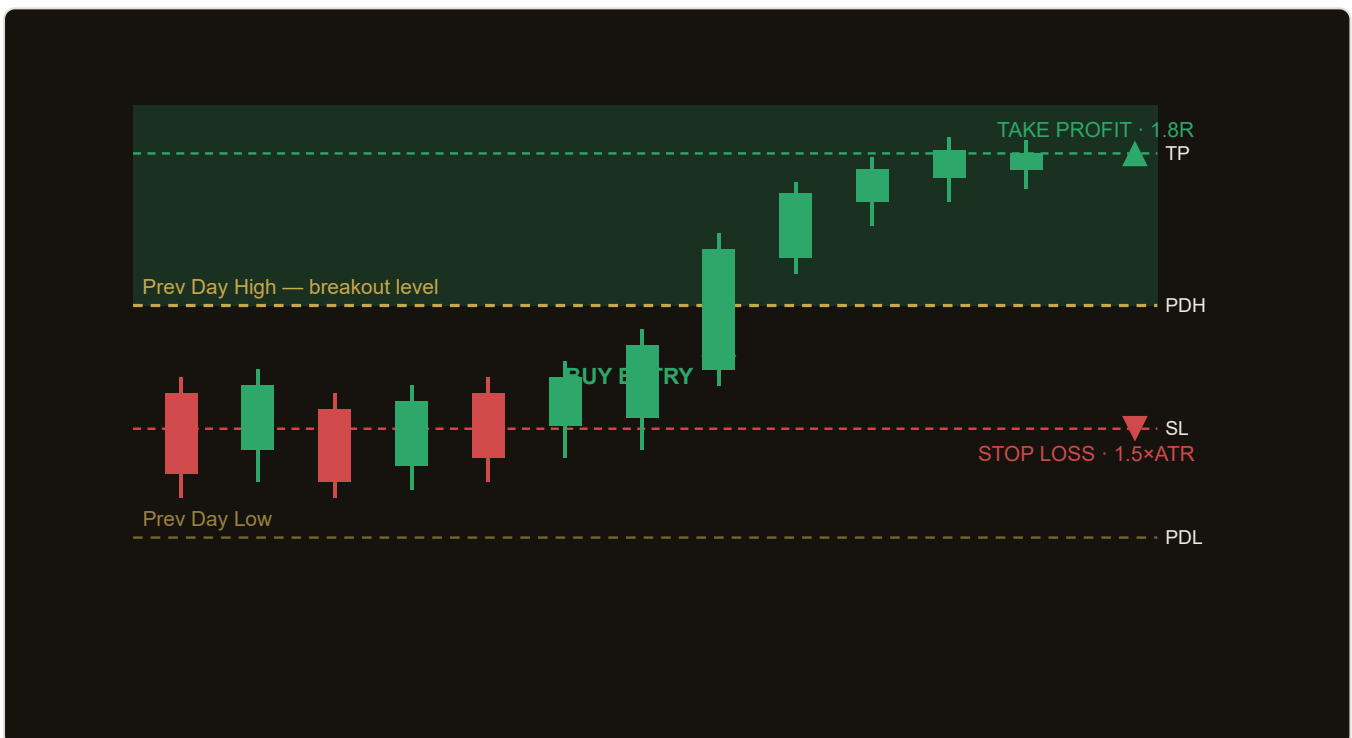
- **One position per Magic**: the EA holds at most a single open position for its magic number at any time; no new entry is taken while one is live.

- **Per-side daily cap:** each direction is limited to `MaxTradesPerDay` entries per session, so a choppy day that keeps poking the level cannot spawn an endless string of losing re-entries.
- **Spread filter:** when `MaxSpreadPoints > 0`, entries are skipped whenever the current spread (in points) is wider than the threshold, protecting against poor fills.
- **Volume normalisation:** the base `Lots` value is rounded to the symbol's volume step and clamped to its min/max limits before the order is sent.

Note — why close-based, not touch-based. The EA requires the bar to *close* beyond the level plus buffer, not merely trade through it intrabar. This deliberately trades some early entries for far fewer false breakouts, which are the primary enemy of any prior-day-level system.

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.

Reading the chart

Price consolidates inside the prior day's range (between the two gold dashed rails). The eighth candle *closes decisively above the Prev Day High plus the ATR buffer*, confirming an upside breakout — the EA enters long at the Ask. The stop is placed $1.5 \times \text{ATR}$ below entry and the target $1.8 \times$ that distance above it; price then trends up into the shaded breakout territory and reaches the take-profit. The short side is the exact mirror around the Prev Day Low.

Parameters

Parameter	Default	Description
AtrPeriod	14	ATR window used for the breakout buffer and for stop / target sizing. Range 5–50, step 1.
AtrStopMult	1.5	Stop distance beyond entry, in ATR multiples. Range 0.5–5.0, step 0.1.
RewardRatio	1.8	Take-profit as a multiple of the (ATR) stop distance. Range 0.5–5.0, step 0.1.
BreakoutBufferAtr	0.10	Breakout confirmation buffer beyond the prev-day level, as a fraction of ATR. Range 0.00–1.00, step 0.05.
MaxTradesPerDay	1	Maximum entries per side per session; guards against re-entry churn. Range 1–5, step 1.
MaxSpreadPoints	60	Skip new entries when the current spread (points) is wider than this. Set 0 to disable. Range 0–400, step 5.
Lots	0.10	Base lot size, normalised to the symbol's volume step and min/max limits. Range 0.01–1.00, step 0.05.
Magic	5307	Magic number identifying this EA's positions. Range 0–9,999,999, step 1.

Recommended Settings

The natural home for this strategy is an index or FX major on an intraday timeframe — the classic domain of prior-day-level breakout trading.

SUGGESTED MARKETS & TIMEFRAMES

- **Indices:** US30, NAS100, and similar — on **M15** or **M30**.
- **FX majors:** EURUSD, GBPUSD — on **M15** or **M30**.
- **Metals:** XAUUSD (Gold) — on **M15** or **M30**.

TUNING GUIDANCE

- **BreakoutBufferAtr** is the primary false-breakout filter. Raise it (e.g. 0.20–0.30) on noisy, whippy symbols to demand a cleaner break; lower it toward 0 on cleanly-trending instruments to catch breaks earlier.
- **AtrStopMult / RewardRatio** set the trade geometry. A wider stop survives more noise but needs a proportionally larger move to hit target; keep **RewardRatio** ≥ 1.0 so winners outweigh losers.
- **MaxSpreadPoints** should be tuned to the symbol — tighten it for FX majors and widen it for indices/metals that naturally quote wider spreads.

- **MaxTradesPerDay** defaults to a single attempt per side; raise it only if you accept the extra churn risk of re-entering a level that keeps getting poked.

Tip. Because every distance is ATR-scaled, the same parameter set transfers across symbols without re-tuning point values. Always validate on the specific symbol, broker, and timeframe in the Strategy Tester before going live, and start with the default `Lots` or smaller.

How to Install on MetaTrader 5

- 1 Copy `PreviousDayRangeBreakout.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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