

Range Rotation Fade

Expert Advisor Documentation

PLATFORM

MetaTrader 5 (MT5)

TYPE

Mean Reversion (Price Action)

TIMEFRAME

H1 (single timeframe)

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

Range Rotation Fade is a pure price-action, mean-reversion Expert Advisor. It assumes that, inside a balanced market, price tends to *rotate* between a well-defined floor and ceiling rather than trend away. When the market briefly pushes through one of those boundaries but is rejected back inside, the EA treats that failed breakout as a defended level and fades it — selling failed pushes above the range high and buying failed pushes below the range low, targeting a move back toward the middle of the range.

The logic rests on two classic building blocks working together: **support / resistance** (a horizontal balance zone built from recent highs and lows) and **candlestick rejection** (a pin-bar style wick that shows the boundary held). A volatility filter based on ATR keeps the strategy out of runaway trends, where fading boundaries would be dangerous. The EA evaluates signals once per completed bar and trades a single position at a time per magic number, all on one timeframe.

Core idea — Fade the sweep, not the trend. A boundary is only worth fading when the range is genuinely *balanced* (its width is small relative to ATR) and the most recent candle *sweeps then rejects* that boundary with a long wick. Both conditions must hold before a trade is sent.

How It Works

1. Building the balance range

On each new bar, the EA looks back over the last `RangeLookback` closed bars that occur *before* the most recently closed candle (the "signal" candle). From that window it derives a horizontal balance zone:

- **Upper boundary** — the highest high in the lookback window (resistance).
- **Lower boundary** — the lowest low in the lookback window (support).
- **Midpoint** — the mean of the two, used as the mean-reversion reference.

The distance between the upper and lower boundary is the **range width**. If this width is zero or negative the bar is skipped.

2. The balance filter (ATR)

A range is only tradable if it represents genuine rotation rather than an early trend. The EA computes the Average True Range over `AtrPeriod` bars and requires:

```
rangeWidth <= MaxRangeAtrMult * ATR
```

If the range is wider than this threshold the market is likely trending and the bar is skipped — the EA will not fade a boundary inside a strong directional move.

3. Sweep & rejection (the entry trigger)

The signal candle is the most recently closed bar. The EA dissects its anatomy — body size, upper wick and lower wick — and looks for a boundary sweep that was rejected back inside the range on a long wick (pin-bar character). To avoid division issues on doji candles, the body used for the wick comparison is floored at `ATR × 0.05`.

- **Short setup** — the signal candle's high reaches or exceeds the upper boundary *but closes back below it*, and its upper wick is at least `WickRatio` times the body. The ceiling was defended → **SELL**.
- **Long setup** — the signal candle's low reaches or breaks the lower boundary *but closes back above it*, and its lower wick is at least `WickRatio` times the body. The floor was defended → **BUY**.

4. Stop loss & take profit

Risk is anchored just beyond the swept extreme, padded by volatility, while the target is a fraction of the range width travelled back toward the opposite side (mean reversion to balance):

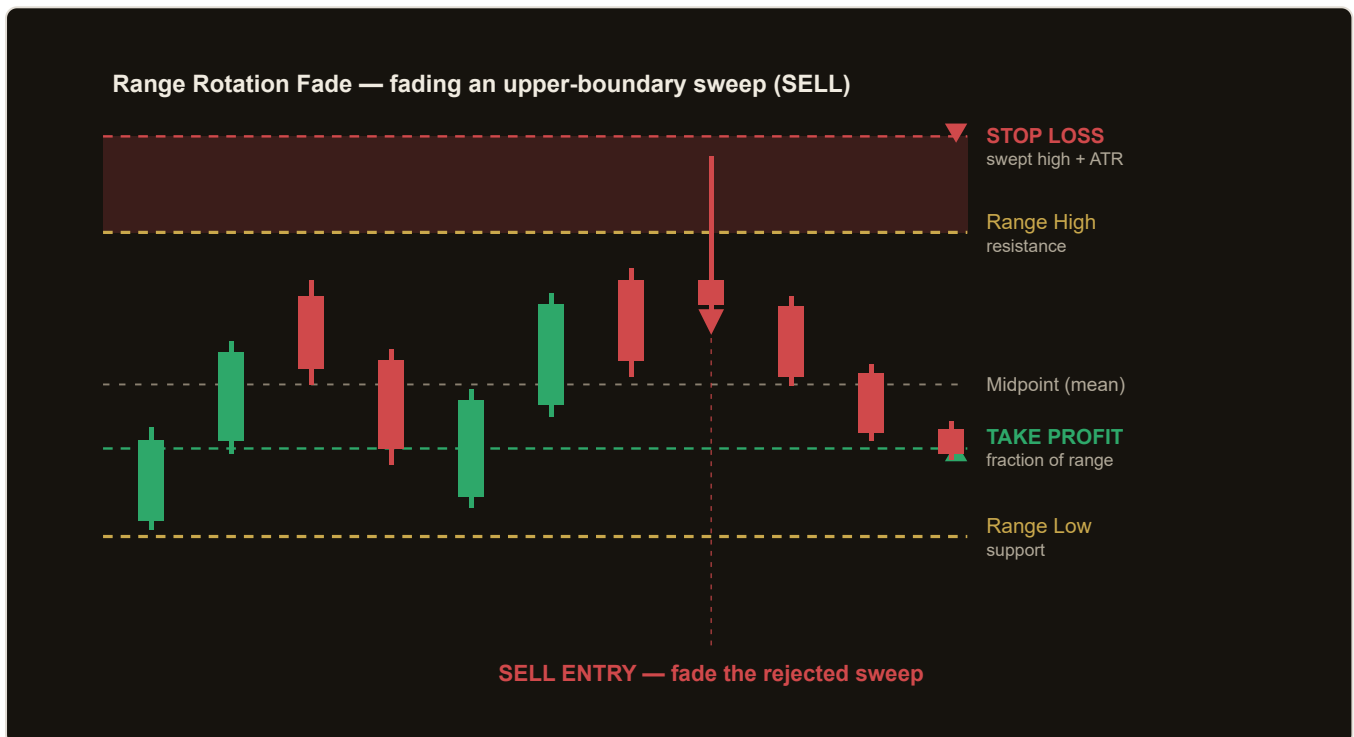
- **Short:** Stop = swept high `+ SIAtrMult × ATR` ; Target = entry `- TpRangeFraction × rangeWidth` .
- **Long:** Stop = swept low `- SIAtrMult × ATR` ; Target = entry `+ TpRangeFraction × rangeWidth` .

An order is only sent when the stop and target sit on the correct sides of the entry price (a sanity check that prevents inverted brackets). With the default `TpRangeFraction` of 0.5, a fade entered near a boundary aims roughly at the midpoint of the range.

Execution discipline — The EA acts only once per completed bar (a new-bar gate), waits for enough history to fill both the lookback window and the ATR period, and holds at most one open position per magic number on the symbol. No pyramiding, no intrabar churn.

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 rotates between the gold support and resistance lines. The signal candle spikes through the range high but is rejected, closing back inside on a long upper wick (a pin bar). The EA fades that failed breakout with a SELL, places the stop just above the swept high (plus ATR padding), and targets a move back toward the middle of the range. A long setup is the exact mirror at the lower boundary.

Parameters

Parameter	Default	Description
RangeLookback	20	Number of closed bars that define the balance range (support / resistance boundaries). Range 10–60, step 5.
AtrPeriod	14	ATR period used for both the balance filter and the stop-loss padding. Range 7–30, step 1.
MaxRangeAtrMult	6.0	The range qualifies as "balance" only if its width \leq this multiple of ATR. Keeps the EA out of trending markets. Range 3.0–12.0, step 0.5.
WickRatio	1.5	The rejection wick must be at least this multiple of the candle body for a valid pin-bar signal. Range 1.0–3.0, step 0.25.
SIATRmult	1.0	Stop-loss padding placed beyond the swept extreme, in ATR multiples. Range 0.5–3.0, step 0.25.
TpRangeFraction	0.5	Take-profit travel as a fraction of the range width ($0.5 \approx$ midpoint from a boundary entry). Range 0.25–1.0, step 0.25.
Lots	0.10	Fixed trade volume in lots. Range 0.01–1.0, step 0.05.
Magic	730215	Magic number identifying the EA's orders; used to manage one position at a time on the symbol.

Recommended Settings

Range Rotation Fade is built for balanced, range-bound conditions. It performs best on liquid instruments during quieter sessions and should be avoided around high-impact news, when ranges break and trends begin.

- **Instruments:** major FX pairs with clear consolidation (e.g. EUR/USD, USD/JPY, AUD/USD) and metals during ranging phases.
- **Timeframe:** H1 is a solid default; M30 suits faster rotations. The EA is single-timeframe, so all logic runs on the chart's period.
- **Balance filter:** keep `MaxRangeAtrMult` around 5–7. Lower values demand tighter ranges (fewer, higher-quality fades); higher values admit looser ranges.
- **Rejection strictness:** raise `WickRatio` toward 2.0–2.5 to require more pronounced pin bars, reducing false signals at the cost of frequency.
- **Risk:** size `Lots` to your account so the worst-case stop (swept extreme + `SIATRmult` \times ATR) stays within a sensible percentage of equity.

Tuning tip — If the EA over-trades during trends, tighten `MaxRangeAtrMult` (smaller) and increase `WickRatio` . If it rarely trades, loosen both slightly. Always validate parameter changes with a walk-forward backtest on the target symbol and timeframe before going live.

How to Install on MetaTrader 5

- 1 Copy `RangeRotationFade.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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