

RSI Level Bounce

Expert Advisor Documentation

PLATFORM

MetaTrader 5 (MT5)

TYPE

Mean Reversion

TIMEFRAME

H1 (any 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

RSI Level Bounce is a support/resistance mean-reversion Expert Advisor. It waits for price to reach an objective horizontal level, reject it with a clean candlestick close, and confirm that momentum is stretched before committing to a trade. The aim is to fade exhaustion at the edges of a range rather than chase trend.

Three conditions must line up at the same level for a trade to fire:

- **Pierce** — the just-closed signal bar trades its wick through the level.
- **Rejection** — the bar closes back on the correct side of the level, leaving the wick behind.
- **Stretched momentum** — RSI is oversold at support, or overbought at resistance.

The EA buys bounces off support and sells rejections of resistance. The two branches are symmetric but fully independent. Risk is defined by an ATR-based stop placed beyond the rejected wick, and the take-profit is a fixed reward multiple of that measured risk. Only one position per Magic number is held at a time, and every decision is made on fully-closed bars.

How It Works

Level Construction

On each newly-closed bar, the EA rebuilds two objective levels from the `Lookback` bars *before* the signal bar:

- **Support** = the lowest low over the lookback window.
- **Resistance** = the highest high over the lookback window.

The signal bar itself (the bar that just closed, shift 1) is excluded from the level so it can be tested against levels formed by prior structure.

Entry Logic

A pierce tolerance, `buffer = ATR × BufferAtrMult`, allows the wick to reach slightly into the zone and still count as a valid test.

LONG — BOUNCE OFF SUPPORT

- **Tested support:** $\text{signal low} \leq \text{support} + \text{buffer}$ (the wick pierced into the zone).
- **Reclaimed support:** $\text{signal close} > \text{support}$ (closed back above the level).
- **Bullish bar:** $\text{close} > \text{open}$.
- **Oversold momentum:** $\text{RSI} \leq 50 - \text{RsiLevel}$ (32 at the default).

When all four are true the EA buys at the Ask.

SHORT — REJECTION OF RESISTANCE

- **Tested resistance:** $\text{signal high} \geq \text{resistance} - \text{buffer}$.
- **Reclaimed resistance:** $\text{signal close} < \text{resistance}$ (closed back below the level).
- **Bearish bar:** $\text{close} < \text{open}$.
- **Overbought momentum:** $\text{RSI} \geq 50 + \text{RsiLevel}$ (68 at the default).

When all four are true the EA sells at the Bid.

Exit Logic — Stop Loss & Take Profit

Risk is measured from the entry to a stop placed beyond the rejected wick, then the target is projected as a reward multiple of that risk:

- **Long stop:** $\min(\text{signal low}, \text{support}) - \text{ATR} \times \text{SLAtrMult}$
- **Short stop:** $\max(\text{signal high}, \text{resistance}) + \text{ATR} \times \text{SLAtrMult}$
- **Take profit:** $\text{entry} \pm \text{risk} \times \text{RewardRatio}$ (above entry for longs, below for shorts).

A trade is only submitted when the measured risk is positive. Stop and target are attached to the order at entry; there is no trailing or partial-close logic.

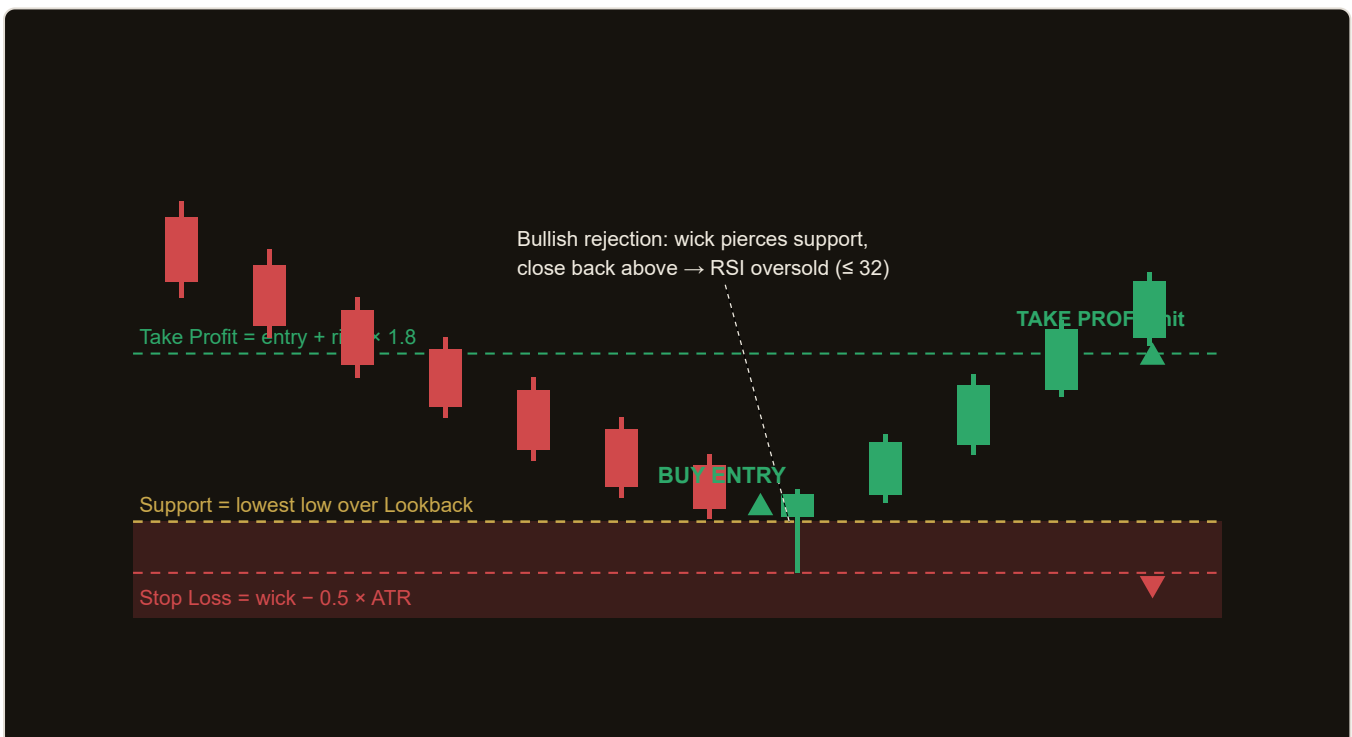
One position at a time. Before evaluating a signal, the EA checks for any open position carrying its Magic number on the current symbol. If one exists, no new trade is taken — positions are never stacked.

Trade Management & Timing

- **New-bar gating:** the EA acts only once per bar, when the bar at shift 1 has just closed. It never trades on partial, still-forming bars.
- **Single timeframe:** every calculation uses the chart's own timeframe, so the system runs on whatever timeframe the chart is set to.
- **Indicators:** RSI (momentum filter) and ATR (buffer and stop sizing) are both read at the signal bar.

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
Lookback	20	Number of bars before the signal bar used to build support (lowest low) and resistance (highest high). Range 5–60, step 5.
RsiPeriod	14	Averaging period of the RSI momentum filter. Range 5–30, step 1.
RsiLevel	18	Distance of the RSI trigger from the 50 midline. Oversold = 50 – level, overbought = 50 + level (32 / 68 by default). Range 5–30, step 1.
AtrPeriod	14	Averaging period of the ATR used to size the pierce buffer and the stop. Range 5–40, step 1.
SIatrMult	0.5	Stop distance placed beyond the rejected wick, in ATR multiples. Range 0.1–3.0, step 0.1.
RewardRatio	1.8	Take-profit distance as a multiple of the measured risk. Range 0.5–5.0, step 0.1.
BufferAtrMult	0.20	How far the wick may pierce into the level and still count as a valid test, in ATR multiples. Range 0.0–1.5, step 0.05.
Lots	0.10	Fixed order volume, in lots. Range 0.01–1.0, step 0.01.
Magic	7100	Magic number identifying this EA's positions. Used to enforce one position at a time on the symbol.

Recommended Settings

The default values are a balanced starting point for liquid instruments on the H1 timeframe. The strategy is timeframe-agnostic, so it can be applied to any timeframe — just re-validate the parameters on the timeframe and instrument you intend to trade.

Suggested baseline (range-bound majors, H1)

```
Lookback      = 20
RsiPeriod     = 14
RsiLevel      = 18      // oversold 32 / overbought 68
AtrPeriod     = 14
SlAtrMult     = 0.5
RewardRatio   = 1.8
BufferAtrMult = 0.20
Lots          = 0.10
```

- **Market type:** mean reversion performs best in ranging or balanced conditions. Strong trends will repeatedly run levels, so favour instruments and sessions that respect support and resistance.
- **RsiLevel:** raising it demands deeper exhaustion (fewer, more selective trades); lowering it loosens the momentum filter (more, lower-conviction trades).
- **BufferAtrMult:** increase it if valid bounces are being missed because wicks overshoot the level; decrease it to require cleaner tests.
- **RewardRatio:** values above 1.0 target a positive risk/reward but reduce hit rate. Tune alongside `SlAtrMult` in the Strategy Tester.

Tip: Because both the buffer and the stop are scaled by ATR, the EA adapts its tolerances to current volatility automatically. Always run the MT5 Strategy Tester on your target symbol and timeframe before any live deployment, and size `Lots` to your account risk.

How to Install on MetaTrader 5

- 1 Copy `RSIlevelBounce.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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