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Rsi Zone Reversal

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Mean Reversion	Any (M30–H1 recommended)	www.algobot.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 Zone Reversal is a mean-reversion Expert Advisor that fades price probes into structural extremes. It maps the recent swing range into a **support floor** and a **resistance ceiling**, then waits for price to push into one of those zones. A trade is only taken when two independent conditions agree: the RSI momentum oscillator signals exhaustion, *and* the candle visibly rejects the level by closing back on the safe side of it.

The strategy deliberately combines two complementary building blocks — **support/resistance** (where price is) and **RSI momentum** (how stretched price is) — so that ordinary touches of a level are ignored and only confirmed, exhausted rejections trigger an entry. It operates on a single timeframe, runs on whatever timeframe the chart is set to, and evaluates its logic **once per closed bar** to avoid intrabar noise.

> **Design idea.** Touching a level is not a signal. The EA requires a *rejection*: the bar must wick into the zone but close back out of it, while RSI confirms the move is over-extended. This filters out clean breakouts, where price punches through a level instead of bouncing off it.

How It Works

1. Bar handling & warm-up

On each tick the EA checks whether a new bar has opened. When the live bar's time changes, the previously live bar (shift 1) has just closed and becomes the **signal bar**. All logic is evaluated against that closed bar, so signals never repaint. The EA waits until enough history exists to compute its indicators — `need = max(ZoneLookback + 2, max(RsiPeriod, AtrPeriod) + 2)` bars — before it begins trading.

2. Building the zones

Before each evaluation, the EA scans the `ZoneLookback` bars *immediately preceding the signal bar* and records:

- **Resistance** — the highest high of that window (the zone ceiling).
- **Support** — the lowest low of that window (the zone floor).

The signal bar itself is excluded from the window, so its own probe cannot define the level it is being tested against. A tolerance band of `ZoneTolAtr × ATR` is added around each level, letting price wick slightly past the exact extreme and still count as a valid "probe."

3. Entry logic

A new position is only opened when there is no existing position for this EA's magic number. The volatility unit for every distance is the current `ATR(AtrPeriod)`.

LONG (BUY) SETUP

- The signal bar's low probes into support: `low ≤ support + tol`
- It closes back above the floor: `close > support`
- It is a bullish (rejection) candle: `close > open`
- Momentum confirms exhaustion: `RSI ≤ Oversold`

When all four agree, the EA buys at the Ask.

SHORT (SELL) SETUP

- The signal bar's high probes into resistance: `high ≥ resistance − tol`
- It closes back below the ceiling: `close < resistance`
- It is a bearish (rejection) candle: `close < open`
- Momentum confirms exhaustion: `RSI ≥ Overbought`

When all four agree, the EA sells at the Bid.

4. Exit logic (stop-loss & take-profit)

Every trade ships with a fixed stop-loss and take-profit, both sized in ATR multiples at the moment of entry. There is no trailing stop — the broker manages the position to one of the two levels:

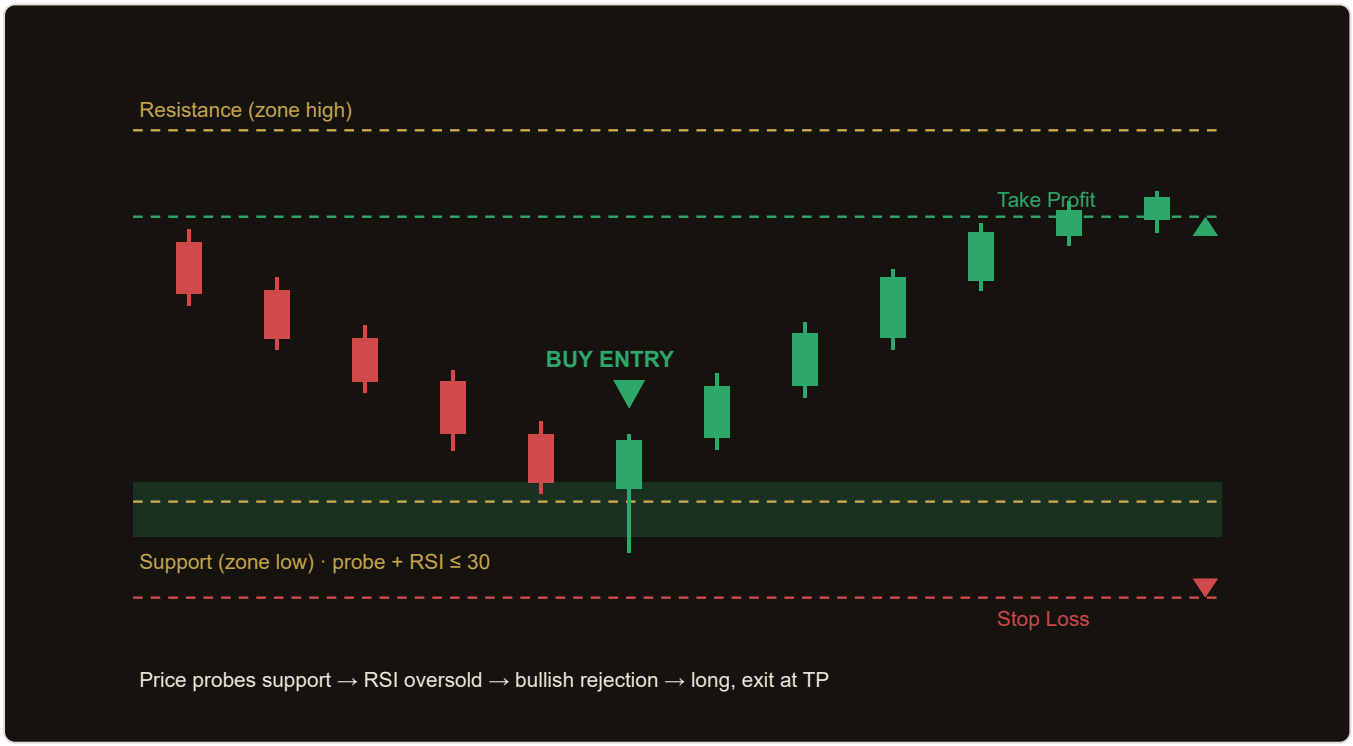
```
Long:   SL = entry − SlAtrMult × ATR      TP = entry + TpAtrMult × ATR
Short:  SL = entry + SlAtrMult × ATR      TP = entry − TpAtrMult × ATR
```

With the defaults (`SlAtrMult = 1.5`, `TpAtrMult = 2.0`) each trade targets a reward-to-risk ratio of roughly **1.33 : 1**. Because both distances scale with ATR, stops and targets automatically widen in volatile conditions and tighten in quiet ones.

> **One position at a time.** The EA holds at most a single position per magic number. It will not stack trades or average into a losing position — a new setup is ignored until the current trade has closed.

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
RsiPeriod	`14`	Lookback period for the RSI momentum oscillator used to confirm exhaustion. Range 5–30.
Oversold	`30`	RSI level at or below which a long (buy) setup is permitted. Range 15–40.
Overbought	`70`	RSI level at or above which a short (sell) setup is permitted. Range 60–85.
ZoneLookback	`20`	Number of bars before the signal bar used to build the support floor and resistance ceiling. Range 8–60.
ZoneTolAtr	`0.25`	Probe tolerance around each zone, expressed as a multiple of ATR. Larger values accept deeper wicks into the zone. Range 0.05–1.0.
AtrPeriod	`14`	Lookback period for the ATR used for zone tolerance and stop/target distances. Range 5–30.
SlAtrMult	`1.5`	Stop-loss distance from entry, as a multiple of ATR. Range 0.5–4.0.
TpAtrMult	`2.0`	Take-profit distance from entry, as a multiple of ATR. Range 0.5–6.0.
Lots	`0.10`	Fixed order volume in lots for every trade. Range 0.01–1.0.
Magic	`240629`	Unique magic number so the EA only manages and counts its own positions.

Recommended Settings

The defaults are a balanced starting point for liquid major FX pairs on intraday timeframes. Because every distance is ATR-scaled, the same parameter set adapts across instruments, but you should always validate on your broker's data before going live.

- **Symbols:** Liquid majors (e.g. EURUSD, GBPUSD, USDJPY) where ranges and reversions are well-defined.
- **Timeframe:** M30–H1. Higher timeframes produce fewer but cleaner zone rejections; lower timeframes generate more signals with more noise.
- **RSI thresholds:** 30 / 70 by default. Widen to 25 / 75 for fewer, higher-conviction setups; narrow toward 35 / 65 for more frequent entries.
- **Zone lookback:** 20 bars suits intraday swings. Increase it to anchor to larger structure, decrease it to react to recent ranges.
- **Risk:** Keep `Lots` small relative to account equity. The 1.5 / 2.0 SL/TP multiples give a roughly 1.33:1 reward-to-risk per trade.

Example — tuning for a ranging pair

On a quiet, range-bound H1 pair you might set `Oversold = 35`, `Overbought = 65`, and `ZoneTolAtr = 0.35` to catch more bounces inside a well-respected range, while keeping `SlAtrMult = 1.5` / `TpAtrMult = 2.0`. On a trendier instrument, tighten to `Oversold = 25` / `Overbought = 75` so the EA only fades the most stretched extremes.

Tip. Always run the MT5 Strategy Tester across several months and across differing volatility regimes before deploying. Mean-reversion logic performs best in ranging conditions and can underperform in strong, sustained trends — size positions accordingly.

How to Install on MetaTrader 5

1. Copy `RsiZoneReversal.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

Trading foreign exchange, CFDs, and other leveraged financial instruments involves substantial risk of loss and is not suitable for all investors. The strategies and tools described in this document are provided for **educational purposes only** and do not constitute financial advice, investment recommendations, or solicitation to trade. Always consult a qualified financial adviser before making trading decisions. Past backtest performance is not indicative of future results.