

# Pivot Rsi Reversion

Expert Advisor Documentation

## PLATFORM

MetaTrader 5 (MT5)

## TYPE

Mean Reversion

## TIMEFRAME

M15 (default)

## WEBSITE

[www.algotbot.live](http://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

**Pivot Rsi Reversion** is a disciplined mean-reversion Expert Advisor that fuses exactly two building blocks — **pivot points** (support and resistance structure) and **RSI** (momentum) — into a single, objective fade rule set. It does not use any other indicators.

The strategy hunts for genuinely exhausted pokes into the edge of a price band. When the market dips into a support line but closes back above it while momentum is oversold, the EA buys the bounce. When it spikes into a resistance line but closes back below it while momentum is overbought, the EA sells the rejection. In both cases the target is the central pivot — the statistical "magnet" of the recent range — and the stop is anchored to structure and scaled by volatility.

Because the engine runs on a single timeframe, the classic "previous-day" pivot is replaced by a **rolling pivot** that is recomputed on every closed bar from the last `PivotLookback` completed bars. The calculation only ever reads bars that have already closed, so the signals are **non-repainting**. Every distance scales with ATR and the rolling range, which keeps the same rules symbol- and volatility-agnostic across markets and timeframes.

**Why two filters?** A naked pivot touch produces many false signals inside a trend. Requiring RSI to be stretched in the *same* direction keeps the EA out of strong momentum and only fades pokes into the band edge that have genuinely run out of steam.

## How It Works

### The Rolling Pivot Ladder

On each newly closed bar the EA scans the last `PivotLookback` closed bars and derives a fresh pivot ladder:

```
H = highest high over the lookback window
L = lowest low over the lookback window
C = close of the most recent closed bar

P = (H + L + C) / 3          central pivot (the magnet / take-profit)
R1 = 2P - L      S1 = 2P - H  the fade lines (entry triggers)
R2 = P + (H-L)  S2 = P - (H-L) structural stop references
```

If the rolling range (`H - L`) collapses to zero, the bar is skipped. The central pivot `P` is always the take-profit target; `S1 / R1` are the lines a setup must fade; `S2 / R2` anchor the protective stop.

### Momentum and Volatility

Two supporting readings are taken as of the most recent closed bar:

- **RSI** (`RsiPeriod`) gauges whether the poke into the band edge is exhausted. A long needs RSI below `RsiOversold`; a short needs RSI above `RsiOverbought`.
- **ATR** (`AtrPeriod`) sizes the stop buffer. The protective stop is placed an ATR multiple (`AtrStopMult × ATR`) beyond the structural level.

### Entry Logic

The EA acts **once per newly closed bar** and holds at most one position per magic number. It will not open a new trade while a position is already open or while the current spread exceeds `MaxSpreadPoints`.

#### LONG — SUPPORT HELD WHILE OVERSOLD

- The just-closed bar is **bullish** (close > open),
- its low dipped to or through **S1** (`low ≤ S1`) but it **closed back above S1** (`close > S1`), and
- RSI is oversold (`RSI < RsiOversold`).

Entry is at the Ask. Stop-loss is placed at `min(S2, bar low) - buffer`; take-profit is the central pivot `P`.

## SHORT — RESISTANCE HELD WHILE OVERBOUGHT

- The just-closed bar is **bearish** (close < open),
- its high spiked to or through **R1** (  $high \geq R1$  ) but it **closed back below R1** (  $close < R1$  ), and
- RSI is overbought (  $RSI > RsiOverbought$  ).

Entry is at the Bid. Stop-loss is placed at  $\max(R2, \text{bar high}) + \text{buffer}$  ; take-profit is the central pivot **P**.

### Exit Logic & Risk Filter

Every trade ships with a fixed stop-loss and take-profit, so the broker manages the exit — there is no trailing logic. Before any order is sent, the EA computes the trade's reward and risk and applies a minimum reward:risk gate:

```
risk = distance from entry to stop-loss
reward = distance from entry to the pivot target P
trade is taken only if reward / risk >= MinRewardRisk
```

Setups whose pivot target sits too close to justify the structural stop are discarded. This keeps the EA from fading into a band edge when the magnet offers too little room.

**One position per magic.** The EA never pyramids. Once a trade is live, the ATR-scaled stop and the pivot-magnet target run the trade to completion before a new setup can be considered.

## Strategy in Action

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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

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Parameter	Default	Description
PivotLookback	20	Window of closed bars used to build the rolling pivot ladder (H, L, C → P, R1/S1, R2/S2). Range 10–60, step 5.
RsiPeriod	14	RSI length used to gauge momentum exhaustion. Range 7–28, step 1.
RsiOversold	35	A long is only allowed when RSI is below this threshold. Range 15–45, step 5.
RsiOverbought	65	A short is only allowed when RSI is above this threshold. Range 55–85, step 5.
AtrPeriod	14	ATR length used to size the protective stop buffer. Range 7–28, step 1.
AtrStopMult	1.00	ATR multiple added beyond the structural stop level (S2/R2 or the bar extreme). Range 0.20–3.00, step 0.10.
MinRewardRisk	1.00	Minimum acceptable reward:risk (target distance ÷ stop distance). Setups below this are discarded. Range 0.30–3.00, step 0.10.
MaxSpreadPoints	100	Skip new entries when the current spread (in points) is wider than this. Range 5–300, step 5.
Lots	0.10	Fixed trade volume in lots. Range 0.01–1.00, step 0.05.
Magic	7401	EA magic number used to identify and manage this strategy's positions. Range 0–9,999,999, step 1.

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## Recommended Settings

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The strategy is volatility-agnostic and adapts across instruments, but it was designed and tuned around a liquid FX major. A sensible starting point is:

- **Symbol:** a liquid FX major such as EURUSD
- **Timeframe:** M15
- **Defaults:** the shipped values (PivotLookback 20, RSI 14 with 35/65 thresholds, ATR 14, AtrStopMult 1.00, MinRewardRisk 1.00) are a balanced baseline

### Tuning by market character

In quieter, range-bound conditions, tightening `RsiOversold` / `RsiOverbought` toward 30/70 demands more stretched momentum and yields fewer but cleaner fades. In faster markets, raising `AtrStopMult` gives the structural stop more breathing room, while raising `MinRewardRisk` filters for setups where the pivot magnet is far enough away to be worth the risk.

**Tip:** Always confirm `MaxSpreadPoints` matches your broker. On a 5-digit FX feed a spread of 100 points equals 10 pips; on instruments with naturally wider spreads you may need to raise it so valid setups are not skipped.

**Backtest first.** Because pivot distances and the RSI/ATR readings scale with each symbol and timeframe, always run a backtest and a demo-forward test on your specific broker feed before committing real capital.

## How to Install on MetaTrader 5

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- 1 Copy `PivotRsiReversion.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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