

Atr Stretch Reversion

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Mean Reversion	H1 (recommended)	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

Atr Stretch Reversion is a single-timeframe mean-reversion Expert Advisor for MetaTrader 5. It treats price as a rubber band anchored to an exponential moving average (EMA): when price over-extends far from that anchor — statistically stretched by a multiple of Average True Range (ATR) — the EA waits for the market to snap back and then fades the exhausted move back toward the mean.

Rather than chasing breakouts, the strategy sells into over-extended rallies and buys into over-extended sell-offs. Crucially, it never fades blindly: an entry requires a confirming *reclaim bar* (the just-closed bar closing back toward the mean) *and* a Relative Strength Index (RSI) reading that signals momentum exhaustion. Risk is defined objectively in ATR units, the long and short rules are perfectly symmetric, and only one position is ever open at a time.

How It Works

1. The mean and the stretch bands

Every completed bar, the EA measures three indicators on the just-closed bar: an `EmaPeriod` EMA (the anchor), an `AtrPeriod` ATR (the volatility yardstick), and an `RsiPeriod` RSI (the exhaustion gauge). Two

dynamic bands are drawn around the anchor:

```
Upper band = EMA + StretchMult × ATR
Lower band = EMA - StretchMult × ATR
```

These bands adapt automatically: in quiet markets they hug the EMA, and in volatile markets they widen — so “too far” is always defined relative to current conditions rather than a fixed pip distance.

2. Entry logic

A setup needs a two-bar sequence: the **prior bar** (shift 2) must over-extend beyond a band, and the **signal bar** (shift 1, just closed) must reject that extreme by closing back toward the mean, with RSI confirming exhaustion.

LONG (buy the dip) – all must be true:

- `prevBar.Low` < `EMA - StretchMult × ATR` (prior bar over-extended down)
- `signalBar.Close` > `signalBar.Open` (reclaim bar closed bullish)
- `signalBar.Close` > `prevBar.Close` (price reclaimed ground)
- `RSI` < `RsiOversold` (momentum exhausted)

SHORT (fade the spike) – the mirror image:

- `prevBar.High` > `EMA + StretchMult × ATR` (prior bar over-extended up)
- `signalBar.Close` < `signalBar.Open` (rejection bar closed bearish)
- `signalBar.Close` < `prevBar.Close` (price gave ground back)
- `RSI` > `100 - RsiOversold` (overbought level)

No repainting. The EA acts only on a freshly-completed bar. Indicators and candle values are read at bar shift 1 (the just-closed bar), so a signal never changes after the fact. Combined with the one-position-at-a-time rule, this keeps the fade clean and risk bounded.

3. Exit logic — stop loss & take profit

Both protective levels are placed at the moment of entry and are sized in ATRs, so they scale with volatility:

```
LONG:   SL = entry - SlAtrMult × ATR      TP = entry + TpAtrMult × ATR
SHORT:  SL = entry + SlAtrMult × ATR      TP = entry - TpAtrMult × ATR
```

With the defaults (`SlAtrMult = 1.50` , `TpAtrMult = 2.00`) each trade targets a reward roughly 1.33× its risk, taking profit as price reverts toward the EMA.

4. Breakeven protection

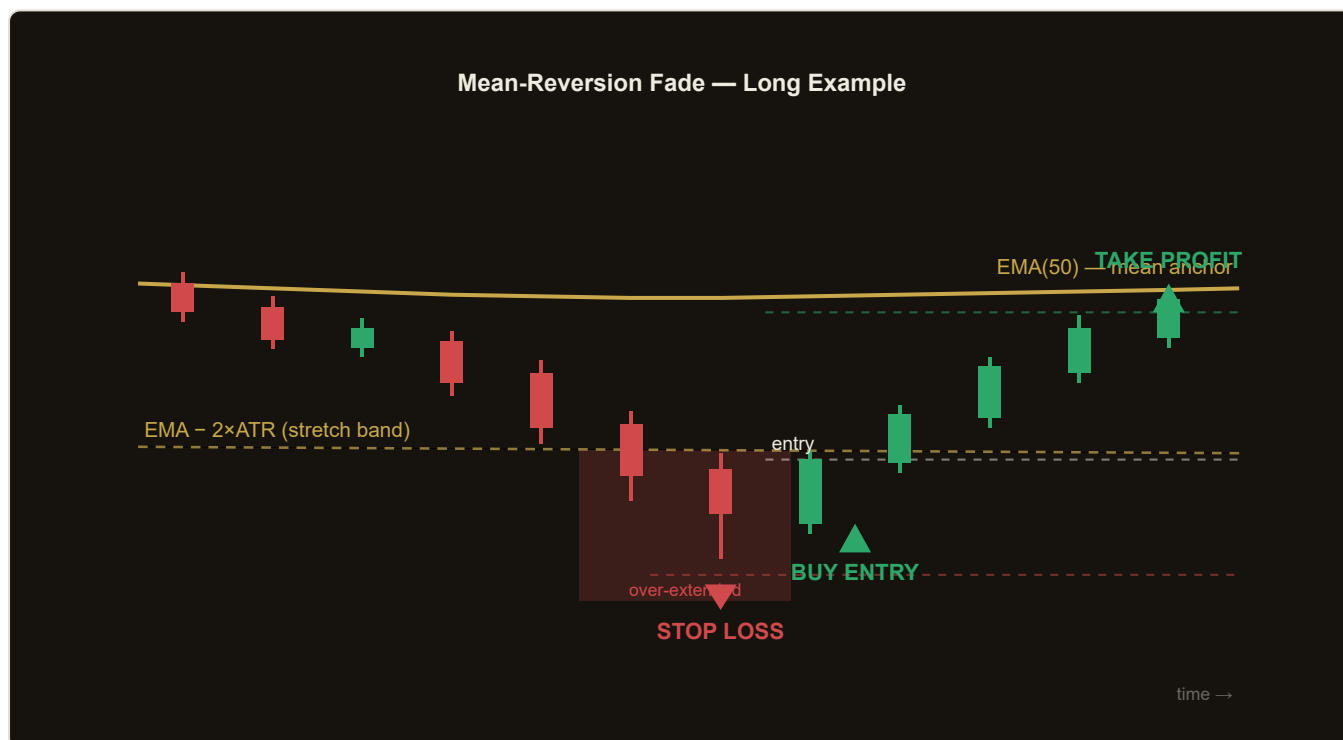
On every tick the EA manages any open position. Once price has travelled $\text{BreakevenAtr} \times \text{ATR}$ in your favour, the stop-loss is pulled to the entry price, removing downside risk from a trade that is already working. Setting $\text{BreakevenAtr} = 0$ disables this behaviour.

5. Position & risk management

- **One trade at a time** — a new setup is ignored while a position is open on the symbol.
- **Fixed volume** — each order uses the `Lots` input.
- **Magic number** — the EA stamps its orders with `Magic` so it only ever manages its own positions, letting it share a terminal with other strategies.

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. It depicts a **long** fade: price stretches below the lower band, a bullish reclaim bar prints, and the EA buys the snap-back toward the EMA.



Illustrative example only. Actual market behaviour varies.

Parameters

Parameter	Default	Description
EmPeriod	50	Look-back of the EMA anchor that defines the mean. Range 20–150, step 5.
AtrPeriod	14	ATR look-back used to size the stretch bands and all stop/target distances. Range 7–28, step 1.
RsiPeriod	14	RSI look-back used to confirm momentum exhaustion at the extreme. Range 7–21, step 1.
StretchMult	2.00	Band width in ATRs. Price must push beyond $\text{EMA} \pm \text{StretchMult} \times \text{ATR}$ to qualify as over-extended. Range 1.00–4.00, step 0.25.
RsiOversold	30	Oversold threshold for longs; the overbought level for shorts is $100 - \text{this value}$. Range 15–40, step 5.
SlAtrMult	1.50	Stop-loss distance from entry, measured in ATRs. Range 0.50–4.00, step 0.25.
TpAtrMult	2.00	Take-profit distance from entry, measured in ATRs. Range 0.50–6.00, step 0.25.
BreakevenAtr	1.00	Move the stop to entry after price travels this many ATRs in profit. Set 0 to disable. Range 0.00–3.00, step 0.25.
Lots	0.10	Fixed order volume, in lots. Range 0.01–1.00, step 0.05.
Magic	7420	Unique identifier stamped on the EA's orders so it manages only its own positions.

Recommended Settings

The default parameters are a balanced starting point suited to liquid, mean-reverting instruments. As with any strategy, validate settings on your broker's data before trading live.

- **Timeframe:** H1 is recommended; the logic also works well on H1–H4. Lower timeframes generate more, noisier signals.
- **Instruments:** liquid FX majors and major indices that tend to revert to a mean, rather than strongly trending or thinly-traded symbols.
- **Selectivity:** raise `StretchMult` for fewer, higher-conviction fades; lower it for more frequent entries.
- **Aggressiveness:** a lower `RsiOversold` (e.g. 25) demands deeper exhaustion before entering; a higher value (e.g. 35) trades more often.
- **Reward-to-risk:** tune the `TpAtrMult` vs `SlAtrMult` ratio to match the symbol's typical reversion depth.

Example — a conservative H1 profile

Keep `EmaPeriod = 50` and `AtrPeriod = 14`, then set `StretchMult = 2.50` and `RsiOversold = 25` to demand a more extreme, better-confirmed stretch. Pair with `SlAtrMult = 1.50` and `TpAtrMult = 2.25` for roughly a 1.5R target, and leave `BreakevenAtr = 1.00` so winners are protected early.

Tip. Because every distance is expressed in ATRs, this EA adapts across instruments without re-tuning pip values. Always run the MT5 Strategy Tester across several years and market regimes before committing real capital, and start with the smallest viable `Lots`.

How to Install on MetaTrader 5

- 1 Copy `AtrStretchReversion.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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