Algobot
Maximize Your Profits

Regime Adaptive Channel Trader

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Regime-Adaptive Hybrid	H1 (single timeframe)	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

The **Regime Adaptive Channel Trader** is a single, self-contained Expert Advisor that **changes its own rules with the market regime** instead of forcing one style onto every condition. The core idea is robustness across environments: a pure breakout system bleeds in ranges, while a pure mean-reversion system gets run over in trends. This EA measures the regime first, then trades only the edge that actually exists in that regime.

Everything is built from two volatility-normalised primitives on a **single timeframe**: an EMA baseline that acts as the "fair value" anchor, and an ATR-based channel (a Keltner-style envelope) drawn around it. The slope of the baseline — expressed in ATR units — classifies the market as either **TREND** or **RANGE**, and the EA then trades a breakout continuation in a trend or fades the channel edges in a range.

Because every decision is taken on the bar that has just **closed**, signals never repaint intrabar. Risk is handled by one uniform, volatility-scaled model — an ATR stop, a fixed reward:risk target, and an optional break-even trigger — applied identically to every entry regardless of regime.

> **Why "regime adaptive"?** The same channel that produces a *breakout* signal in a trending market produces a *fade* signal in a ranging market. The baseline slope decides which interpretation is valid, so the EA never fights the prevailing condition.

How It Works

Building Blocks

All components are computed on the primary timeframe only and are normalised by volatility so the logic behaves consistently across instruments and volatility regimes.

- **Baseline** — `EMA(BaselinePeriod)` of closes; the fair-value anchor.
- **Volatility unit** — `ATR(AtrPeriod)`; the yardstick every distance is measured in.
- **Channel** — `Baseline ± ChannelMult × ATR`; a Keltner-style envelope with upper and lower edges.
- **Regime** — the normalised baseline slope over `SlopeLookback` bars, in ATR units: `normSlope = (Baseline_now − Baseline_prev) / ATR`.

```
|normSlope| >= TrendThreshold   ->  TREND regime
|normSlope| <  TrendThreshold   ->  RANGE regime
```

Trend Regime — Ride the Expansion

When the baseline is sloping strongly, the EA trades breakout continuation **with the slope only**; counter-trend breakouts are ignored.

- **Buy** — slope is up *and* a bar closes **above** the upper channel for the first time (`c1.Close > upper` while the prior close was at or below it), with a **bullish body**.
- **Sell** — slope is down *and* a bar closes **below** the lower channel for the first time, with a **bearish body**.

Range Regime — Fade the Edges

When the slope is flat, the EA fades failed pokes through the channel back toward fair value. Requiring the close to return *inside* the channel filters out the genuine breakouts that would trap a naive fader.

- **Sell** — a bar's high pokes **above** the upper channel but the bar **closes back inside** with a bearish body (a failed breakout).
- **Buy** — a bar's low pokes **below** the lower channel but the bar **closes back inside** with a bullish body.

> **Same channel, two meanings**
>
> A close pushing above the upper band is a *buy breakout* when the slope is trending up, but a rejected wick above the same band is a *sell fade* when the slope is flat. The regime classifier is what separates the two.

Risk Management

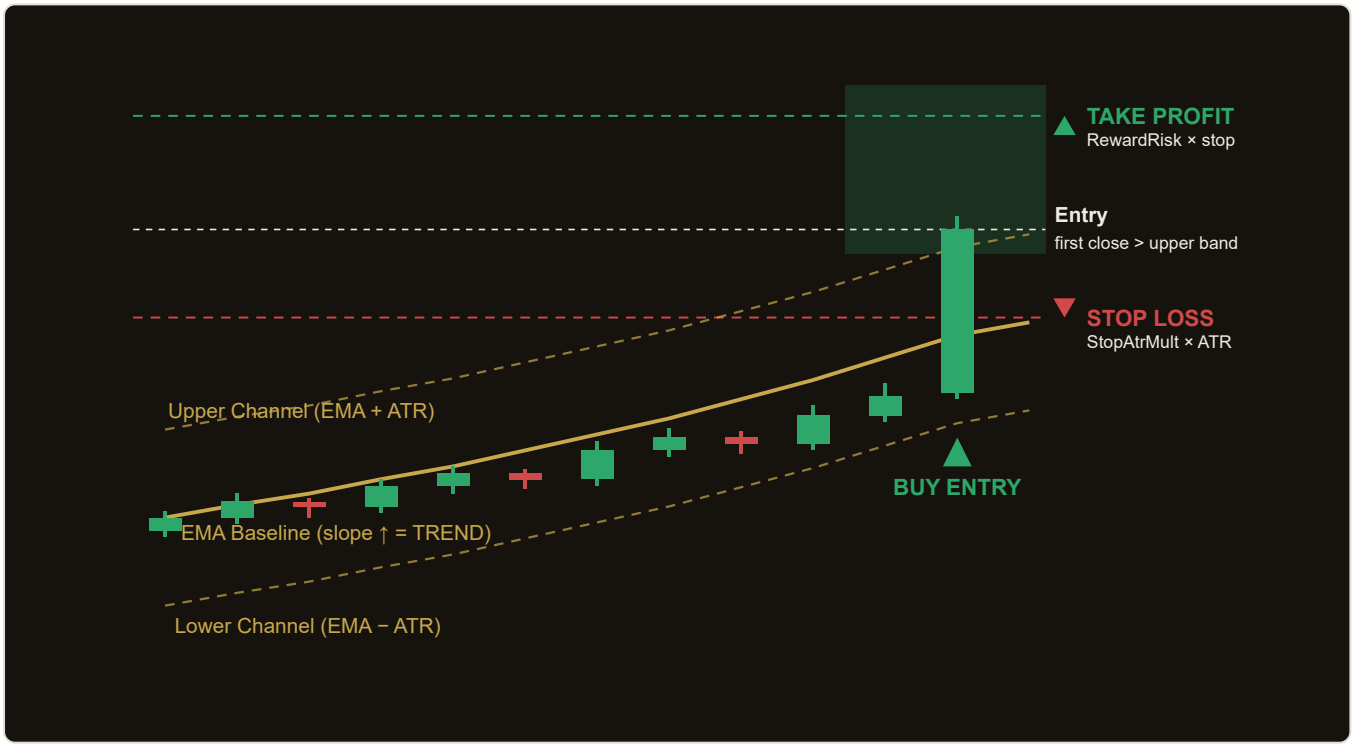
Identical for every entry, in every regime, and scaled to current volatility:

- **Stop** — `StopAtrMult × ATR` from the entry price (adapts as volatility changes).
- **Target** — `RewardRisk × stop distance`, a fixed reward:risk ratio.
- **Break-even** — once price has advanced `BreakEvenR × risk` in profit, the stop is pulled to the entry price, removing risk from the runner. Setting `BreakEvenR = 0` disables this.
- **One position per magic** — only a single position is held at a time, and the break-even logic is re-checked on every tick.

> **No repainting.** New entries are evaluated only on the bar that just closed (`shift 1`), and the "first close beyond the edge" conditions compare against the previous closed bar. The signal that appears is the signal that stays.

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 the **trend regime**: an up-sloping baseline, followed by the first bar to close above the upper channel, triggering a breakout-continuation long with an ATR stop and a fixed reward:risk target.



Illustrative example only. Actual market behaviour varies.

Parameters

Every parameter below is exposed as an EA input. Defaults, and the optimisation ranges built into the strategy, are shown for each.

Parameter	Default	Description
BaselinePeriod	`40`	EMA period for the fair-value baseline anchor. Range 20–120, step 5. Longer = smoother baseline and fewer regime flips.
AtrPeriod	`14`	ATR period used as the volatility unit for the channel, stops and slope normalisation. Range 7–28, step 1.
SlopeLookback	`12`	Number of bars over which the baseline slope is measured to classify the regime. Range 4–40, step 2.
TrendThreshold	`0.50`	Normalised-slope threshold (in ATR units). `|normSlope| ≥ this` = TREND, otherwise RANGE. Range 0.10–1.50, step 0.05.
ChannelMult	`1.5`	Channel half-width as a multiple of ATR (`Baseline ± ChannelMult × ATR`). Range 0.5–4.0, step 0.1.
StopAtrMult	`1.5`	Stop-loss distance as a multiple of ATR from the entry price. Range 0.5–4.0, step 0.1.
RewardRisk	`1.8`	Take-profit distance as a multiple of the stop distance (fixed reward:risk). Range 1.0–4.0, step 0.2.
BreakEvenR	`1.0`	Move the stop to entry once price advances this many multiples of the initial risk. `0` disables break-even. Range 0.0–3.0, step 0.25.
Lots	`0.10`	Fixed trade volume in lots. Range 0.01–1.0, step 0.05.
Magic	`4820`	Magic number identifying this EA's positions. Enforces one position at a time and isolates it from other EAs on the account.

Recommended Settings

The defaults are a balanced starting point for liquid FX majors on the **H1** timeframe. Because the whole model is volatility-normalised, the same settings adapt reasonably across instruments — but always validate on your own broker's data before going live.

SUGGESTED STARTING POINT

- **Symbols:** liquid FX majors (e.g. EURUSD, GBPUSD, USDJPY) or major indices.

- **Timeframe:** H1 — enough bars per regime to keep the slope classifier stable, without excessive noise.
- **Regime sensitivity:** keep `TrendThreshold` near the 0.50 default. Lower it toward 0.10 to spend more time in the trend logic; raise it toward 1.50 to fade more often.
- **Channel width:** `ChannelMult = 1.5` suits typical FX volatility. Widen it on noisier symbols to reduce false pokes.
- **Risk:** the default `StopAtrMult 1.5` / `RewardRisk 1.8` pairing gives a favourable payoff while keeping stops outside routine noise; leave `BreakEvenR = 1.0` to protect runners.

> **Position sizing.** `Lots` is a fixed volume — it does not auto-scale to account equity. Set it to a value consistent with the risk you are willing to take on a single `StopAtrMult × ATR` stop, and reduce it on higher-volatility instruments.

> **Optimise, don't overfit.** The built-in ranges are there for walk-forward testing, not for cherry-picking a single best-looking combination. Prefer parameter regions that stay profitable across neighbouring values and across multiple market periods.

How to Install on MetaTrader 5

1. Copy `RegimeAdaptiveChannelTrader.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

> **Tip:** Before trading live, run the EA in the MT5 Strategy Tester on several months of history for your chosen symbol and timeframe, then forward-test on a demo account to confirm behaviour matches expectations.

Risk Warning

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