

Aroon Trend Shift

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Trend Following	H1 and higher	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

Aroon Trend Shift is a trend-following Expert Advisor built on the **Aroon indicator** (Tushar Chande, 1995). Unlike most oscillators, Aroon does not measure how far price has travelled — it measures *how recently* a new extreme was printed. A reading near 100 means a fresh high or low was just made; a reading near 0 means the extreme is old and the current leg has gone stale.

For a lookback period n , the two Aroon lines are computed from the last $n+1$ completed bars:

$$\begin{aligned}\text{AroonUp} &= 100 \times (n - \text{barsSinceHighestHigh}) / n \\ \text{AroonDown} &= 100 \times (n - \text{barsSinceLowestLow}) / n\end{aligned}$$

The EA looks for a **confirmed directional shift**: the moment the Aroon lines cross, filtered by two independent conditions so that only decisive moves are traded — a strength threshold on the winning line and a price-vs-EMA confirmation. Positions are protected with an ATR-scaled stop, target a fixed reward-to-risk multiple, and are moved to breakeven once price has run one full stop-distance in favour. It is designed for liquid, trending instruments (major FX pairs and metals) on H1 and higher timeframes, and runs on whatever single timeframe the chart is set to.

How It Works

The Directional Shift

The core trigger is a crossover of the two Aroon lines. A **bullish cross** occurs when `AroonUp` rises above `AroonDown` (bulls are now making the more recent extreme); a **bearish cross** is the mirror image. On its own, a raw crossover fires far too often inside choppy markets, so two additional filters must agree before an order is placed.

Entry Logic

A trade is only opened when all three conditions line up on the newest completed bar:

- **Long** = bullish cross *and* `AroonUp ≥ StrengthThreshold` *and* `close > EMA`
- **Short** = bearish cross *and* `AroonDown ≥ StrengthThreshold` *and* `close < EMA`

The strength threshold (default 70) makes sure the shift is *decisive* — one side must be clearly printing fresh highs or lows, not merely edging ahead in a marginal, noisy crossover. The EMA filter is a second, unrelated confirmation: price must close on the trade's side of its moving average. Combining recency-of-extreme with price-versus-mean sharply reduces whipsaw entries.

Note: All signal logic runs on **completed bars only**. The EA detects a new bar, evaluates the just-closed candle, and never acts on the still-forming bar. This avoids the repainting and premature signals that come from reacting to an unfinished candle.

Exit Logic & Position Management

Every position is opened with a hard stop-loss and take-profit, and is managed on each new bar:

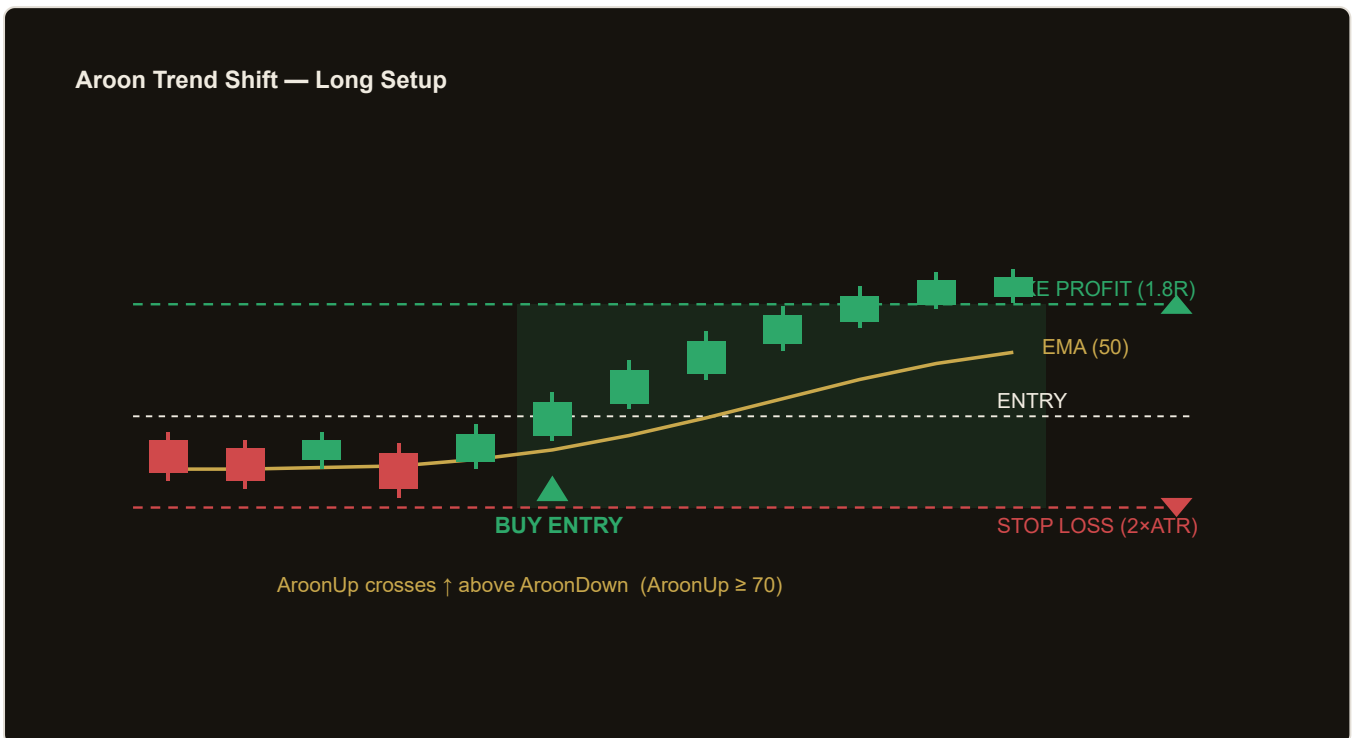
- **Stop-loss** is placed `AtrStopMult × ATR` away from entry, so it scales automatically with current volatility.
- **Take-profit** sits at `RewardRiskRatio` times the stop distance (default 1.8R).
- **Breakeven lock** — once price has travelled one full stop-distance (1R) in favour, the stop is pulled up to the entry price so a winning trade cannot turn into a loss.
- **Opposite-shift exit** — if a confirmed shift appears against the open position, the EA closes it immediately. The reverse side may then be opened on a subsequent confirmed bar. The EA never stacks multiple positions in the same direction.

Risk Model

Because stops and targets are derived from ATR, the monetary risk per trade tracks the instrument's current volatility rather than a fixed pip count. With defaults, a trade risks 2 ATR and targets 3.6 ATR (2×1.8). Order size is fixed by the `Lots` input.

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.

Reading the chart

Price makes a fresh low, then reverses. As the recovery prints new near-term highs, **AroonUp** climbs above **AroonDown** and clears the 70 strength threshold. The confirming candle closes above the EMA(50), so a long is opened at the dashed entry line. The stop sits 2×ATR below; once price advances one full stop-distance it is trailed to breakeven, and the position runs to the 1.8R take-profit target.

Parameters

Parameter	Default	Description
AroonPeriod	14	Aroon lookback — number of bars used to locate the most recent high/low. Range 8–40, step 2.
StrengthThreshold	70	The winning Aroon line must reach this value for the shift to count as "decisive". Range 50–90, step 5.
EmaPeriod	50	Period of the EMA confirmation filter — price must close on the trade side of it. Range 20–120, step 5.
AtrPeriod	14	ATR window used for volatility-scaled stop distance. Range 7–28, step 1.
AtrStopMult	2.0	Stop distance expressed in ATRs from the entry price. Range 1.0–4.0, step 0.5.
RewardRiskRatio	1.8	Take-profit as a reward:risk multiple of the stop distance. Range 1.0–3.5, step 0.5.
Lots	0.10	Fixed order volume in lots. Range 0.01–1.0, step 0.05.
Magic	3141	Magic number used to identify and manage this EA's positions.

Recommended Settings

The EA is built for liquid, trending markets. As a starting point:

- **Instruments:** Major FX pairs (EURUSD, GBPUSD, USDJPY) and metals (XAUUSD).
- **Timeframe:** H1 and higher — the design assumes trending behaviour that develops over multiple bars. Lower timeframes carry more noise and more false crossovers.
- **Defaults:** The shipped values (Aroon 14, threshold 70, EMA 50, ATR 14, 2.0× stop, 1.8R) are a balanced trend-following baseline.

Tuning tips: Raise `StrengthThreshold` (e.g. 80) to take fewer but higher-conviction signals; lower it to trade more often. A longer `EmaPeriod` demands a more established trend before entering. Widen `AtrStopMult` in volatile conditions to avoid being stopped out by normal fluctuation.

Always validate first. Backtest and forward-test any parameter set on your own broker's data and spreads before risking live capital. Optimal values differ by symbol, timeframe, and market regime.

How to Install on MetaTrader 5

- 1 Copy `AroonTrendShift.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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