

Gann Activator Trend

Expert Advisor Documentation

PLATFORM

MetaTrader 5 (MT5)

TYPE

Trend Following

TIMEFRAME

H1 (symbol / timeframe agnostic)

WEBSITE

www.algotbot.live

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Overview

Gann Activator Trend is a trend-following Expert Advisor built around the classic **Gann HiLo Activator** — a simple, non-repainting regime switch that flips a market between an "up" and a "down" state and then rides the move until the trend rolls over. The EA reads only **closed bars**, so nothing repaints, and it runs on whatever single symbol and timeframe it is attached to.

Each completed bar, the EA computes two "activator" rails: the average of the previous **HiLoPeriod** highs (**smaHigh**) and the average of the previous **HiLoPeriod** lows (**smaLow**). A decisive close above the upper rail flips the activator **up**; a decisive close below the lower rail flips it **down**. Otherwise the previous direction is retained, giving the activator its characteristic staircase-like trend persistence. A slower **trend EMA** keeps every trade on the correct side of the bigger picture, and an **ATR-based stop and target** define and volatility-scale risk on every entry.

Core idea. The direction only changes on a genuine breakout of the opposite rail. Small pushes into the band leave the regime unchanged — price must decisively break through to switch sides. This filters out the noise that whipsaws simpler crossover systems.

How It Works

1. The Gann HiLo Activator (the regime switch)

For every completed bar the EA looks at the `HiLoPeriod` bars *strictly before* it and builds the two rails:

- **Upper rail** (`smaHigh`) — the simple moving average of the previous `HiLoPeriod` highs.
- **Lower rail** (`smaLow`) — the simple moving average of the previous `HiLoPeriod` lows.

The direction is then advanced one bar at a time:

```
if close > smaHigh -> activator flips UP (+1)
if close < smaLow  -> activator flips DOWN (-1)
else               -> keep the previous direction
```

Because the rails use only prior closed data, the direction never repaints. On start-up the EA primes the direction over already-closed history, so the very first live bar can register a genuine flip rather than a false first signal.

2. The Regime Filter (trend EMA)

A slower EMA of closes (`TrendEmaPeriod`) keeps the EA aligned with the dominant trend. Longs are only permitted when the close is **above** the EMA; shorts only when the close is **below** it. This discards the many false flips that occur while price is chopping around its mean.

3. Entry Logic

A trade is only opened on a **fresh flip** — the bar on which the activator changes state — that also agrees with the regime filter:

- **Long** — the activator flips **up** (it was not up before) *and* the close is above the trend EMA.
- **Short** — the activator flips **down** (it was not down before) *and* the close is below the trend EMA.

The system always trades **with** the freshly-confirmed direction, never against it. At most one position per `Magic` is held at a time.

4. Exit & Risk Management

Every trade is bracketed by two independent exit mechanisms:

- **ATR stop & target.** On entry, a stop loss is placed at `AtrSlMult × ATR` and a take profit at `AtrTpMult × ATR` away from the entry price. Risk is therefore defined and volatility-scaled from the moment the trade opens.
- **Flip-exit (reversal engine).** If the activator flips the *opposite* way while a position is open, that position is closed immediately. If the regime filter also agrees with the new direction, the EA can open a fresh trade

in the opposite direction on the same bar.

Example — a long trade, start to finish

After a pullback, a bar closes above the upper activator rail (`smaHigh`) while price is trading above the 50-period trend EMA. The activator flips

up

, and because the close is above the EMA, the EA buys at the ask. It sets the stop `2 × ATR` below entry and the target `3 × ATR` above. Price trends higher and tags the target for a win — or, if momentum fades and the activator flips

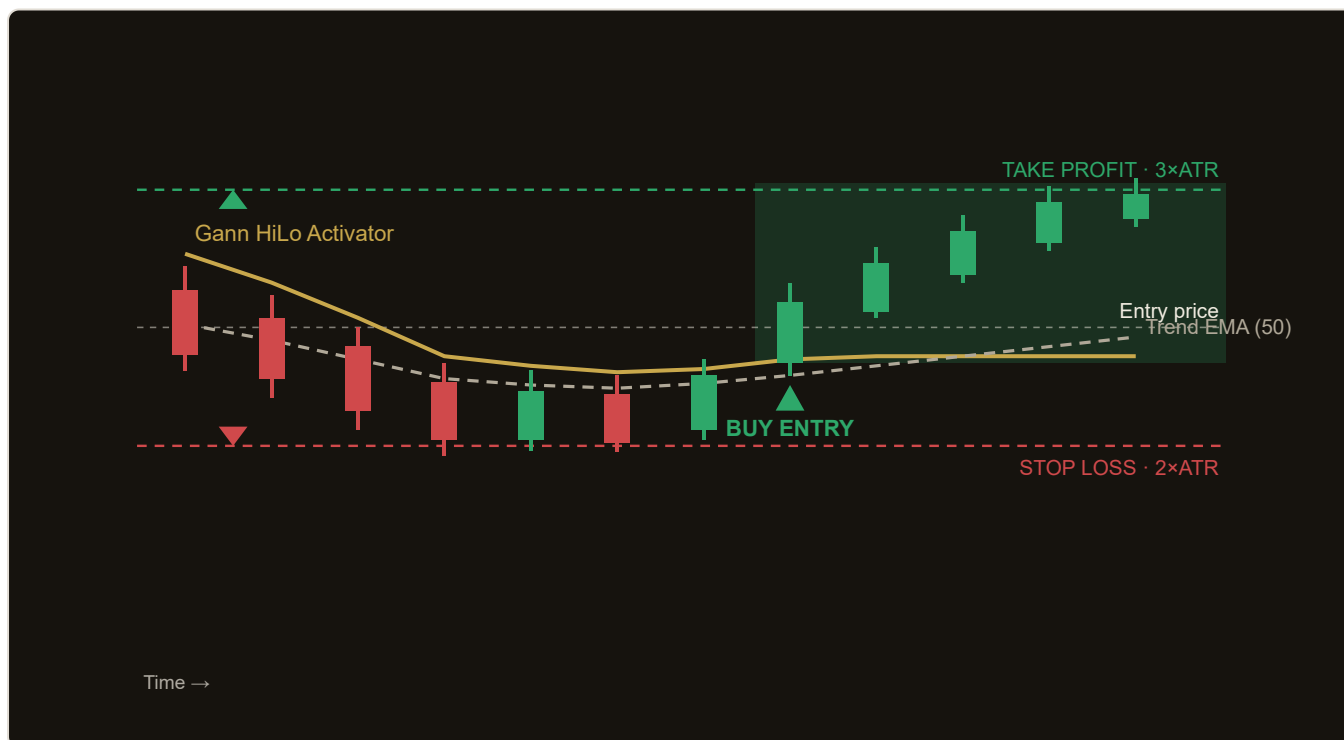
down

first, the position is closed at market by the flip-exit before the stop is reached.

Why two exits? The ATR bracket protects against a fast adverse move that never gives a clean flip, while the flip-exit gets you out early when the trend genuinely rolls over — often well before the fixed stop would trigger. Together they bracket every trade on both a price and a regime basis.

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
HiLoPeriod	10	SMA lookback for the activator rails (the SMA of highs and the SMA of lows). Lower values flip faster and trade more; higher values demand a wider breakout. Range 3–40, step 1.
TrendEmaPeriod	50	Period of the slower EMA regime filter. Longs require the close above it, shorts below it. Larger values enforce a stronger prevailing trend. Range 10–200, step 5.
AtrPeriod	14	ATR lookback used to size the volatility-scaled stop and target. Range 5–40, step 1.
AtrSlMult	2.0	Stop-loss distance as a multiple of ATR ($\text{entry} \mp \text{AtrSlMult} \times \text{ATR}$). Range 0.5–6.0, step 0.5.
AtrTpMult	3.0	Take-profit distance as a multiple of ATR ($\text{entry} \pm \text{AtrTpMult} \times \text{ATR}$). Range 0.5–10.0, step 0.5.
Lots	0.10	Fixed trade volume in lots. Range 0.01–1.00, step 0.05.
Magic	40719	Magic number used to identify and manage this EA's positions. Range 0–9,999,999, step 1.

Tip. The default stop/target multipliers give a **2 : 3 risk-to-reward** profile (`AtrSlMult 2.0` vs `AtrTpMult 3.0`). Because both are scaled by ATR, the same settings adapt automatically to quiet and volatile conditions without re-tuning.

Recommended Settings

Gann Activator Trend is symbol- and timeframe-agnostic — it runs on whatever chart it is attached to — but it is designed to shine on markets that trend and hold their moves.

- **Instruments:** a trending FX major or metal, for example **EURUSD** or **XAUUSD**.
- **Timeframe:** **H1** is the default playground; the logic works on any single timeframe you backtest.
- **Parameters:** start from the defaults (`HiLoPeriod 10` , `TrendEmaPeriod 50` , `AtrPeriod 14` , `AtrSlMult 2.0` , `AtrTpMult 3.0`).
- **Position sizing:** keep `Lots` conservative relative to account equity; the EA does not compound or scale size.

Always validate first. Backtest and forward-test on a demo account with your broker's exact spread, commission, and execution before committing real capital. The activator flips more often on choppy, ranging markets — tighten the regime filter (larger `TrendEmaPeriod`) or widen `HiLoPeriod` if you see excessive whipsaw.

How to Install on MetaTrader 5

- 1 Copy `GannActivatorTrend.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.