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Daily Open Gravity Fade

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Mean Reversion	Intraday M15–H1	www.algobot.live

Overview

Daily Open Gravity Fade is a mean-reversion ("gravity") Expert Advisor anchored on a single, fixed session reference: the **current trading day's opening price**. Unlike a moving average or VWAP, the day open is a static line that every intraday participant can see — and in balanced, ranging FX sessions, price is repeatedly pulled back toward it.

The strategy measures how far the just-closed bar has stretched away from the day open, expressed in **ATR units**. When price is stretched a meaningful distance — but not so far that a genuine trend has taken over — the EA fades the move, buying stretches below the open and selling stretches above it, and targets the open itself as the magnet.

The day-open anchor is rebuilt each calendar day (UTC) from the **first closed bar of a new date**. No higher timeframe is read; everything is aggregated from the primary-timeframe bars, so the EA runs on whatever chart timeframe is selected at attach or backtest time.

Home turf: liquid FX majors on intraday frames — for example EURUSD or USDJPY on M15–H1 — the natural habitat of daily-open reversion. The EA works on any timeframe, but the reversion edge is strongest on liquid instruments inside a single session.

How It Works

The Day-Open Anchor

On every new UTC calendar date, the EA captures the open of the first closed bar and holds it as the `dayOpen` for the remainder of that day. This static line is the "centre of gravity" that the strategy fades price back toward.

Measuring the Stretch

For each newly-closed primary bar, the signed distance of its close from the day open is normalised by the current ATR:

```
z = (close − dayOpen) / ATR
```

A positive `z` means price has stretched *above* the open; a negative `z` means it has stretched *below*. The ATR (lookback `AtrPeriod`) is computed from a rolling history of closed primary bars, so the threshold automatically scales with prevailing volatility.

Entry Logic

A naked stretch is not enough — a runaway trend will keep going — so the EA only fades *inside a band* and refuses to catch a falling knife beyond it. Two conditions bracket the trade, and a signal-bar direction confirms the snap-back has begun:

- **Long setup** — `z ≤ −StretchAtr` (stretched below the open) **and** `z ≥ −MaxStretchAtr` (not a runaway down-trend / outer guard) **and** the signal bar is **bullish** (`close > open`). Buy at Ask, target the day open, place the stop `StopAtr × ATR` below the entry.
- **Short setup** — `z ≥ StretchAtr` (stretched above the open) **and** `z ≤ MaxStretchAtr` (inside the guard band) **and** the signal bar is **bearish** (`close < open`). Sell at Bid, target the day open, place the stop `StopAtr × ATR` above the entry.

Exit Logic — Stop, Target & Reward:Risk

Every trade carries a hard structural target and an ATR-scaled protective stop set at entry:

- **Take-profit** is the day open itself — a real structural magnet, not an arbitrary offset.
- **Stop-loss** is `StopAtr × ATR` beyond the entry (below for longs, above for shorts), scaling with volatility.
- **Minimum reward:risk filter** — the setup is rejected if `reward / risk < MinRewardRisk`. This discards fades where price has already drifted too close to the open to justify the ATR stop.

Because the open target and ATR stop fully manage the exit, only **one position per Magic** is held at a time — no averaging, no grid.

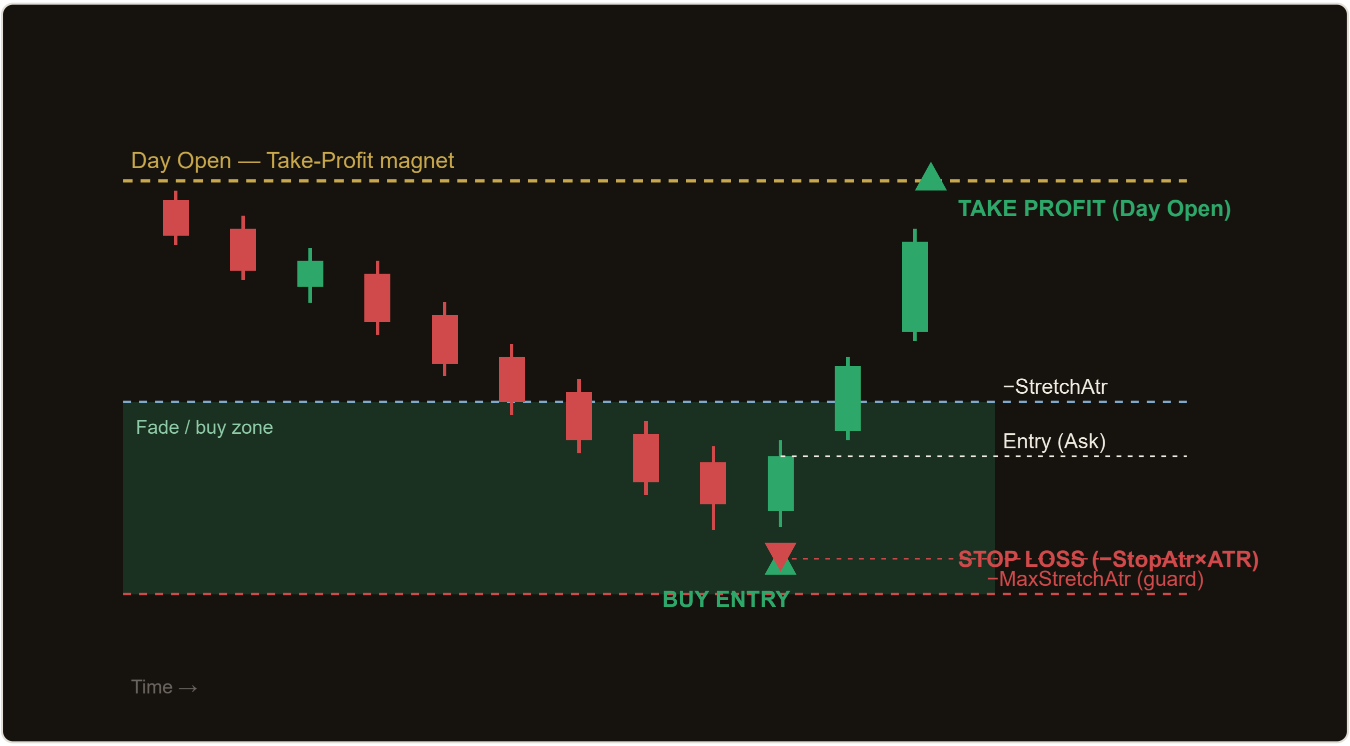
Trade Filters

- **One position per Magic** — the structural stop and open target manage the exit; no new entry is taken while a position is open.
- **Spread guard** — new entries are skipped when the current spread (in points) exceeds `MaxSpreadPoints`, protecting the fade from being eaten by execution cost.
- **Warm-up** — the EA waits until it has at least `AtrPeriod + 1` closed bars and a valid day open before evaluating any signal.

> **Why fade the day open?** In ranging sessions, order flow tends to rotate around the day's reference price. The outer `MaxStretchAtr` guard is what keeps the fade from fighting a real breakout: once price escapes the guard band, the setup is simply skipped rather than reversed.

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 drifts below the day open into the guard band, a bullish signal bar snaps back, the EA buys at Ask targeting the day open, with an ATR stop below.



Illustrative example only. Actual market behaviour varies.

Reading the illustration

Price drifts below the day open and pushes into the shaded fade zone — past the `-StretchAtr` inner threshold but still above the `-MaxStretchAtr` outer guard. A bullish green signal bar prints, confirming the snap-back has begun. The EA buys at Ask, sets the take-profit at the day open (the magnet) and the stop `StopAtr × ATR` below entry. Because the open sits far enough above entry, the reward:risk clears `MinRewardRisk` and the trade is taken. Price then reverts to the open and the target fills.

Parameters

Parameter	Default	Description
AtrPeriod	`14`	ATR lookback used to scale the stretch distance and the stop. Range 5–40, step 1.
StretchAtr	`1.2`	Inner threshold — how many ATR away from the day open before a fade is considered. Range 0.4–4.0, step 0.1.
MaxStretchAtr	`3.5`	Outer trend-guard — skip fades once price is beyond this many ATR from the open (runaway protection). Range 1.5–8.0, step 0.5.
StopAtr	`1.0`	Stop distance in ATR multiples beyond the entry. Range 0.3–3.0, step 0.1.
MinRewardRisk	`0.7`	Reject setups whose open target is closer than this multiple of the ATR stop distance. Range 0.3–3.0, step 0.1.
MaxSpreadPoints	`60`	Skip new entries when the current spread (points) is wider than this. Range 5–300, step 5.
Lots	`0.10`	Trade volume in lots. Range 0.01–1.0, step 0.05.
Magic	`8821`	Magic number identifying this EA’s positions. Range 0–9,999,999, step 1.

Recommended Settings

The defaults are tuned for liquid FX majors on intraday timeframes. Use the notes below as a starting point and always validate on your own broker’s data before going live.

INSTRUMENTS & TIMEFRAME

- **Symbols:** liquid FX majors — EURUSD, USDJPY, GBPUSD.
- **Timeframe:** M15 to H1, where daily-open reversion is most reliable.

- **Session:** best suited to balanced, ranging conditions; the outer guard automatically stands aside during strong trend days.

TUNING GUIDANCE

- **StretchAtr** — raise it to demand a larger stretch (fewer, higher-conviction fades); lower it for more frequent entries.
- **MaxStretchAtr** — the trend filter. Tighten it to bail out of runaway moves sooner; widen it to fade deeper extensions.
- **StopAtr** and **MinRewardRisk** — tune together. A tighter stop (`StopAtr`) with the open target fixed raises the achievable reward:risk, but risks being stopped by intrabar noise.
- **MaxSpreadPoints** — keep this tight relative to your broker; a fade's edge is small and easily consumed by spread.

> **Backtest first.** Because the day-open anchor is rebuilt in UTC, run the Strategy Tester across several weeks of quality tick data on your target symbol and timeframe before deploying. Confirm the day-open reset aligns with your broker's server-day convention.

How to Install on MetaTrader 5

1. Copy `DailyOpenGravityFade.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.