

# Camarilla Trend Day Expansion

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Breakout · Camarilla Trend-Day	M15 – H1	<a href="http://www.algotbot.live">www.algotbot.live</a>

**⚠ 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

**Camarilla Trend Day Expansion** is a directional breakout Expert Advisor built on the classic Camarilla pivot equation. Floor and prop traders have long split every session into two regimes using the previous day's range: a *range day*, where price rotates between the inner H3/L3 reversal bands, and a *trend day*, where price bursts through the outer H4/L4 bands and runs. Most Camarilla systems fade the inner bands. This EA does the opposite — it trades **only the trend-day expansion**, buying the break of the outer H4 band and projecting to the H5 extension target, with a mirror-image short through L4 to L5.

The strategy is deliberately self-scaling. The breakout confirmation buffer and the protective-stop distance are both ATR multiples, and the take-profit is a real structural magnet (the H5/L5 extension), so no point size is ever hard-coded. A minimum reward-to-risk filter discards breaks whose target sits too close to justify the stop, a spread filter blocks costly fills, and only one position per magic number is ever held so that the structural stop and the extension target manage every exit.

Its natural home is a liquid FX major, gold, or an index — EURUSD, XAUUSD, or US30 — on the M15 to H1 timeframes, but it runs on whatever single timeframe is selected on the chart at run time.

# How It Works

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## Camarilla Levels

Every trading day, the EA derives a fixed set of Camarilla levels from the **previous completed day's** High, Low, and Close, where the range  $R = \text{High} - \text{Low}$ :

$$\begin{array}{lll} H3 = C + R \times 1.1 / 4 & L3 = C - R \times 1.1 / 4 & \text{(inner reversal bands)} \\ H4 = C + R \times 1.1 / 2 & L4 = C - R \times 1.1 / 2 & \text{(outer breakout bands)} \\ H5 = (H / L) \times C & L5 = 2 \times C - H5 & \text{(trend-day extension targets)} \end{array}$$

Only the outer bands ( $H4$ ,  $L4$ ) and the extension targets ( $H5$ ,  $L5$ ) are used for trading. The inner bands are computed for reference. Once a day closes, its levels are **frozen** — they are static and non-repainting for the entire following session.

## Single-Timeframe Day Construction

A defining feature of this EA is that it never reads a higher timeframe such as D1. Instead, the "day" is reconstructed by watching the primary chart's bar dates roll over. The EA accumulates the running High, Low, and Close of the current day bar by bar; when the calendar date of a freshly closed bar changes, the day that just ended is finalized and its Camarilla levels are computed and frozen to govern the new day.

**Why single-timeframe matters:** By deriving the daily range from the chart's own bars rather than pulling a separate D1 series, the levels are always consistent with the timeframe you backtest and trade, and there is no risk of a repainting or misaligned higher-timeframe feed. The levels for today are fully determined the moment yesterday's final bar closes.

## Entry Logic

The EA acts **once per newly-closed bar**, evaluating the freshly-closed candle against the frozen prior-day levels. Each side may fire at most **once per day**, and a genuine conviction close is required — not a wick poke.

### LONG — TREND DAY UP

- The freshly closed bar closes **clear above H4** plus the ATR break buffer ( $\text{close} > H4 + \text{BreakBufferAtr} \times \text{ATR}$ ).
- The bar is a **bullish body** ( $\text{close} > \text{open}$ ) whose body is at least  $\text{BodyFrac}$  of the candle's range — a conviction close.
- The **prior** closed bar was still at or below the H4 buffer, confirming a genuinely fresh break rather than a continuation.
- The extension target is valid ( $H5 > H4$ ).

## SHORT — TREND DAY DOWN

- Symmetric: a fresh bearish conviction close **below L4** minus the ATR break buffer, with the prior bar still at or above that threshold, and  $L5 < L4$ .

### Exit Logic — Stop Loss & Take Profit

Every trade is submitted with a fixed structural stop and target attached — there is no trailing logic. The broken band and the breakout candle's own extreme define the stop; the Camarilla extension defines the target.

- **Long stop:** the lower of the breakout bar's low and H4, minus the ATR stop buffer —  $SL = \min(\text{bar Low}, H4) - \text{StopBufferAtr} \times \text{ATR}$ . This tucks the stop just back under the broken band.
- **Long target:** the H5 trend-day extension —  $TP = H5$ .
- **Short stop:** the higher of the breakout bar's high and L4, plus the ATR stop buffer —  $SL = \max(\text{bar High}, L4) + \text{StopBufferAtr} \times \text{ATR}$ .
- **Short target:** the L5 trend-day extension —  $TP = L5$ .

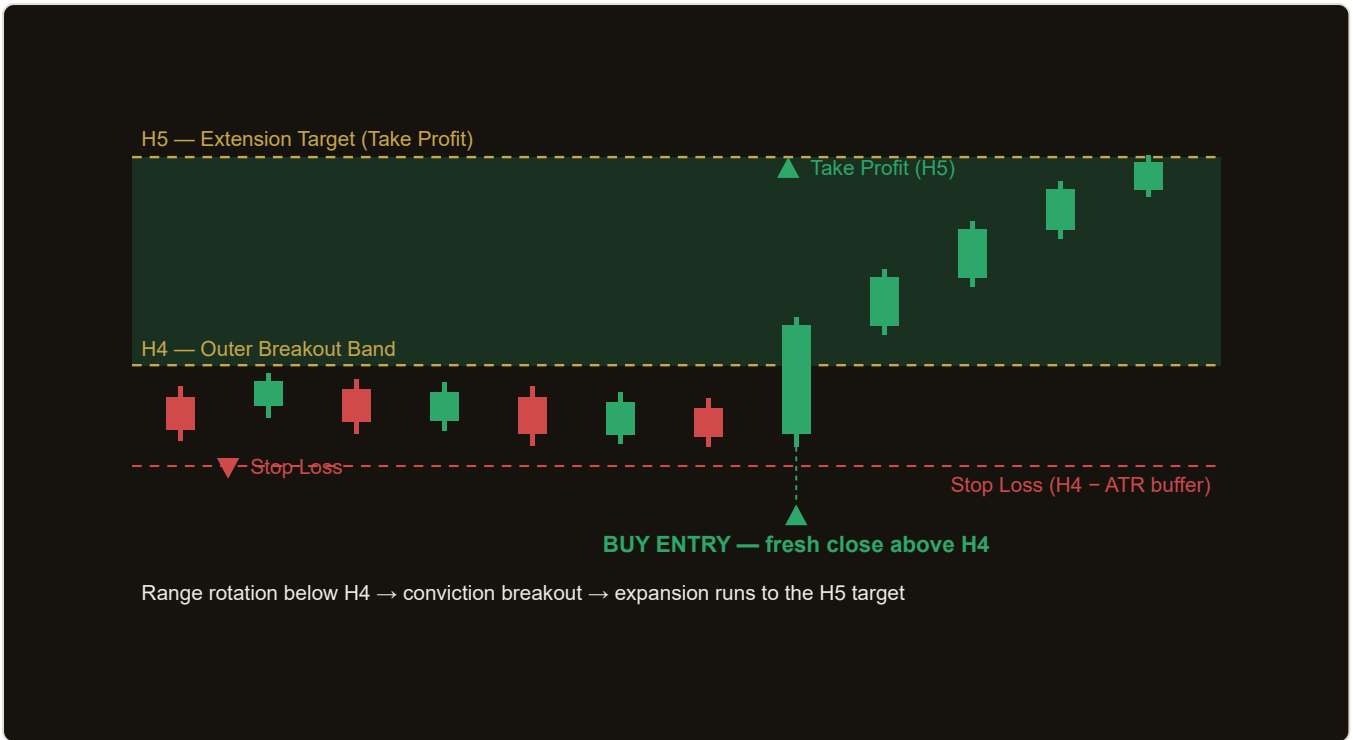
### Filters & Trade Management

- **Reward-to-risk floor:** a break is discarded unless the distance to the H5/L5 target is at least  $\text{MinRewardRisk}$  times the stop distance.
- **Spread filter:** new entries are skipped whenever the current spread (in points) exceeds  $\text{MaxSpreadPoints}$ .
- **One position per magic:** only a single position is held at a time, so the structural stop and extension target fully govern the exit.
- **Once per side per day:** after a long or short fires, that side is disarmed until the next calendar day rolls over.

## Strategy in Action

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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
AtrPeriod	14	ATR lookback used for both the breakout confirmation buffer and the stop-distance buffer. Range 5–40, step 1.
BreakBufferAtr	0.10	How far beyond H4 / L4 (in ATRs) the bar must close to confirm the break. Range 0.00–1.00, step 0.05.
StopBufferAtr	0.50	Extra stop distance beyond the broken band and the breakout bar's extreme, in ATRs. Range 0.10–2.50, step 0.10.
BodyFrac	0.50	Minimum breakout-candle body / range — demands a conviction close, not a wick. Range 0.20–0.90, step 0.05.
MinRewardRisk	1.20	Reject breaks whose H5 / L5 target is closer than this multiple of the stop risk. Range 0.50–4.00, step 0.10.
MaxSpreadPoints	100	Skip new entries when the current spread (in points) is wider than this. Range 5–300, step 5.
Lots	0.10	Fixed lot size for each trade. Range 0.01–1.00, step 0.05.
Magic	7758	Magic number identifying this EA's positions. Range 0–9,999,999, step 1.

## Recommended Settings

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The Camarilla framework is a day-trading tool, so the EA is happiest on liquid instruments with clean daily ranges and on intraday timeframes where a "trend day" has room to develop.

- **Instruments:** a liquid FX major (EURUSD), gold (XAUUSD), or an index (US30). These have the clean, meaningful daily ranges the Camarilla levels depend on.
- **Timeframe:** M15 to H1. Enough bars per day to construct the daily range, while still leaving room for the expansion to run to H5 / L5.
- **Conviction:** keep `BodyFrac` at or above 0.50 so only genuine breakout candles qualify; raise it toward 0.60–0.70 to be more selective on choppy symbols.
- **Reward:risk:** the default `MinRewardRisk` of 1.20 filters out cramped breaks; increase it if you want fewer, higher-quality trend-day trades.
- **Spread:** tune `MaxSpreadPoints` to your broker — tighter for FX majors, wider for gold and indices.

### Example — EURUSD M15

Yesterday closed with  $H = 1.0920$ ,  $L = 1.0840$ ,  $C = 1.0900$ , giving  $R = 0.0080$ . Today's outer band is  $H4 = 1.0900 + 0.0080 \times 1.1 / 2 = 1.0944$ , and the extension target is  $H5 = (1.0920 / 1.0840) \times 1.0900 \approx 1.0980$ . When a bullish M15 bar closes clear above 1.0944 with a strong body while  $ATR = 0.0012$  (break buffer  $\approx 1.2$  pips), the EA buys the expansion, sets the stop just under H4 minus the ATR buffer, and targets 1.0980 — provided the resulting reward:risk clears 1.20.

**Tip:** Because the levels are frozen at the first date change of each session, always let the EA run continuously across the day boundary. Attaching it mid-session simply means it waits for the next completed day before its first frozen level set becomes active.

## How to Install on MetaTrader 5

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- 1 Copy `CamarillaTrendDayExpansion.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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