

Ultimate Oscillator Reversal

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Trend-Pullback Reversal	M15 – H1	www.algotbot.live

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Overview

Ultimate Oscillator Reversal is a trend-pullback reversal Expert Advisor built around Larry Williams' Ultimate Oscillator (UO), gated by the slope of a trend EMA. Rather than blindly fading extremes, it only takes reversal signals that align with the prevailing trend — turning a coin-flip mean-reversion trigger into a disciplined “buy the dip in an uptrend” (or “sell the bounce in a downtrend”) entry.

The Ultimate Oscillator blends buying pressure across three lookbacks — short (7), mid (14) and long (28) — so a single fast spike cannot whipsaw the reading the way a lone oscillator does. A rising trend EMA declares the path of least resistance to be up, so a dip that pushes UO down into oversold is treated as a *pullback*, not a top. When UO turns back up through the oversold line, the EA buys the resumption. The short side is the exact mirror in a falling trend.

Risk is volatility-scaled and symbol-agnostic: the stop and target are multiples of Average True Range (ATR), giving a wider reward than risk by default. The EA holds one position per magic number at a time and skips costly fills through a spread gate. It is designed for a trending major such as EURUSD or GBPUSD, or an index like US500, on the M15–H1 timeframes.

How It Works

The Ultimate Oscillator

For each closed bar the EA computes buying pressure and true range relative to the previous close, then averages them over each lookback period:

```
trueLow   = min(Low, prevClose)      trueHigh  = max(High, prevClose)
buyingPr  = Close - trueLow          trueRange = trueHigh - trueLow
avg_p     =  $\Sigma \text{buyingPr}(p) / \Sigma \text{trueRange}(p)$  over the last p bars
UO        =  $100 \times (4 \cdot \text{avg7} + 2 \cdot \text{avg14} + 1 \cdot \text{avg28}) / (4 + 2 + 1)$ 
```

The UO oscillates between 0 and 100. A **low** reading means sellers are stretched; a **high** reading means buyers are stretched. The 4/2/1 weighting emphasises the short lookback while the mid and long windows keep the reading stable.

The Trend Filter

The trade direction is never allowed to fight the dominant trend. The regime is decided purely from the slope of an EMA on the current timeframe — no second timeframe is used:

- **Trend up** — `EMA(TrendEmaPeriod)` now is greater than one bar ago.
- **Trend down** — `EMA(TrendEmaPeriod)` now is less than one bar ago.

Entry Logic

The EA evaluates its rules once per newly-closed bar, using the two most recent UO readings to detect a threshold crossing:

- **LONG** — trend EMA rising *AND* UO crossed **up** through the Oversold level (previous UO < level ≤ current UO).
- **SHORT** — trend EMA falling *AND* UO crossed **down** through the Overbought level (previous UO > level ≥ current UO).

Why this works: requiring the UO extreme *and* a same-direction trend converts a naked mean-reversion signal into a with-trend continuation entry. Naked oscillator reversals get run over by trends — UO can sit pinned in oversold while price keeps bleeding. Aligning the fade with the prevailing order flow avoids catching a falling knife.

Exit Logic & Risk

Every position is protected by a volatility-scaled stop loss and take profit set at entry from the current ATR:

- **Stop Loss** = entry - (`AtrStopMult` × ATR) for longs, or entry + (`AtrStopMult` × ATR) for shorts.

- **Take Profit** = entry + (`AtrTargetMult` × ATR) for longs, or entry - (`AtrTargetMult` × ATR) for shorts.

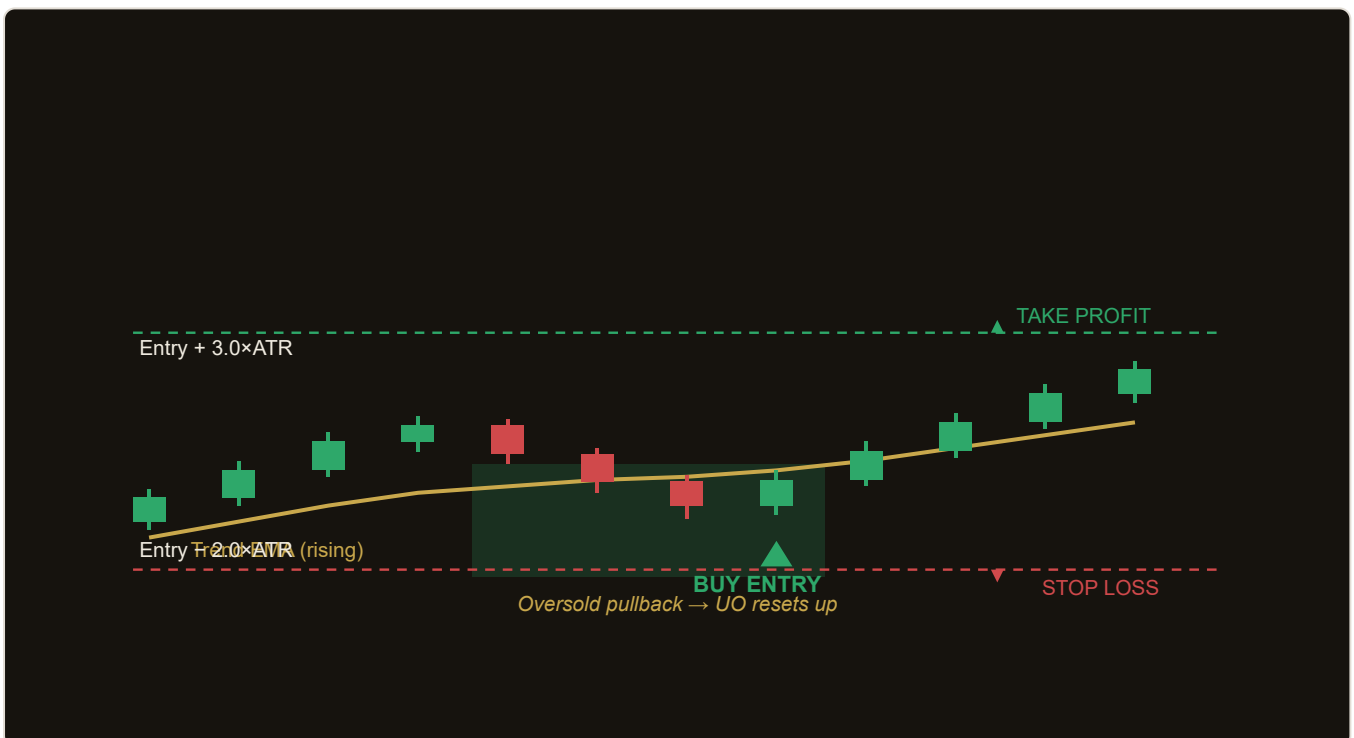
With the defaults (stop 2.0× ATR, target 3.0× ATR) the target is wider than the stop, giving a reward-to-risk of roughly 1.5:1. There is no trailing stop — the fixed SL/TP manage the entire exit.

Trade Management

- **One position per magic** — while a position with the EA's magic number is open, no new entries are taken.
- **Spread gate** — if the current spread (in points) exceeds `MaxSpreadPoints`, the signal is skipped to avoid costly fills.
- **Bar-close execution** — signals are only evaluated on a newly-closed bar, so intrabar noise cannot trigger repeated entries.

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

The trend EMA (gold) is rising throughout, so only long setups are considered. Price pulls back on the red candles and the Ultimate Oscillator dips into its oversold zone. When UO turns back up through the Oversold level on the green reversal bar, the EA buys the resumption. The stop sits $2.0 \times$ ATR below entry and the target $3.0 \times$ ATR above — a wider reward than risk.

Parameters

Parameter	Default	Description
ShortPeriod	7	Ultimate Oscillator short lookback. Range 3–15, step 1.
MidPeriod	14	Ultimate Oscillator mid lookback. Range 8–30, step 1.
LongPeriod	28	Ultimate Oscillator long lookback. Range 20–60, step 1.
OversoldLevel	35.0	An up-cross through this UO level (in a rising trend) triggers a long. Range 15–45, step 1.0.
OverboughtLevel	65.0	A down-cross through this UO level (in a falling trend) triggers a short. Range 55–85, step 1.0.
TrendEmaPeriod	50	Period of the trend EMA whose slope must agree with the fade direction. Range 20–200, step 5.
AtrPeriod	14	ATR period used to size the stop and target. Range 5–40, step 1.
AtrStopMult	2.0	Stop-loss distance as a multiple of ATR. Range 0.5–5.0, step 0.1.
AtrTargetMult	3.0	Take-profit distance as a multiple of ATR. Range 0.5–8.0, step 0.1.
MaxSpreadPoints	30	Skip the trade if the current spread (points) is wider than this. Range 1–200, step 1.
Lots	0.10	Fixed trade volume in lots. Range 0.01–1.00, step 0.05.
Magic	7318	EA magic number identifying its positions. Range 0–9,999,999, step 1.

Recommended Settings

The strategy is designed as a trend-pullback / swing style. The defaults are a sensible starting point for a trending major or a major index.

- **Symbols:** a trending major such as EURUSD or GBPUSD, or an index like US500.
- **Timeframe:** M15 to H1.
- **Oscillator:** keep the classic 7 / 14 / 28 lookbacks; widen the Oversold/Overbought bands (e.g. 30 / 70) for fewer, higher-conviction signals.
- **Trend filter:** the 50-period EMA suits M15–H1; raise `TrendEmaPeriod` for a slower, more selective regime filter.
- **Risk:** the 2.0× / 3.0× ATR stop and target give roughly a 1.5:1 reward-to-risk. Adjust `Lots` so a single ATR-based stop risks only a small, fixed fraction of the account.

Tip: use the MT5 Strategy Tester to walk-forward optimise `OversoldLevel` , `OverboughtLevel` and `TrendEmaPeriod` on your chosen symbol before trading live. Confirm the spread gate (`MaxSpreadPoints`) matches your broker's typical spread for that instrument.

How to Install on MetaTrader 5

- 1 Copy `UltimateOscillatorReversal.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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