

Qqe Trailing Band Cross

Expert Advisor Documentation

PLATFORM

MetaTrader 5 (MT5)

TYPE

Momentum / Trend-Following

TIMEFRAME

H1 (configurable)

WEBSITE

www.algotbot.live

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Overview

Qqe Trailing Band Cross is a momentum and trend-following Expert Advisor built on the *Quantitative Qualitative Estimation* (QQE) method. QQE is, in essence, a “supertrend” — but instead of being computed on price, it is computed on a doubly-smoothed RSI. The smoothed RSI carries a self-adjusting trailing band whose width is the smoothed average of the RSI's own bar-to-bar change (an “ATR of RSI”).

Because the band *breathes* with each instrument's RSI volatility, it absorbs the small oscillations that make a raw RSI line whipsaw, yet it still flips promptly when momentum genuinely changes regime. The EA takes a position only when a fresh QQE trend flip is confirmed by the smoothed RSI being on the momentum-confirming side of the 50 midline — filtering out the low-conviction flips that occur while RSI hovers near neutral.

The core idea — a supertrend on RSI, not on price. A classic supertrend rides an ATR band around price. QQE takes the same ratcheting-band logic and applies it to a smoothed RSI, using the RSI's *own* volatility as the band width. The result is a momentum oscillator that behaves like a trend-following stop — sticky in trends, quick to flip when momentum reverses.

How It Works

Indicator Construction

Every component is recursive and carried bar-to-bar. On each newly-completed candle the strategy advances the following chain:

```
1. Rsi      = Wilder RSI(Close, RsiPeriod)
2. RsiMa    = EMA(Rsi, SmoothFactor)          -> the smoothed RSI
3. AtrRsi   = |RsiMa - RsiMa[prev]|           -> the RSI "true range"
4. MaAtrRsi = EMA(AtrRsi, WildersPeriod)      where WildersPeriod = 2 * RsiPeriod - 1
5. Dar      = EMA(MaAtrRsi, WildersPeriod) * QqeFactor -> band half-width
6. Trailing bands (supertrend logic on RsiMa):
   newLong  = RsiMa - Dar    (lower line, tracked in an uptrend)
   newShort = RsiMa + Dar    (upper line, tracked in a downtrend)
```

The two bands only **ratchet in the trend's favour** — the lower band can rise but never fall while an uptrend holds, and the upper band can fall but never rise while a downtrend holds. The trend state itself flips on a decisive cross of the *opposite* band:

- **Flip UP** when the smoothed RSI crosses *above* the prior upper band.
- **Flip DOWN** when the smoothed RSI crosses *below* the prior lower band.

Entry Logic

Entries are distinct and symmetric for long and short. A fresh trend flip must be confirmed by the smoothed RSI having cleared a configurable distance from the 50 midline:

- **LONG** when the QQE trend flips *up* and `RsiMa > 50 + MidThreshold`
- **SHORT** when the QQE trend flips *down* and `RsiMa < 50 - MidThreshold`

The midline gate keeps entries on the momentum-confirming side of neutral, trimming the low-conviction flips that occur while RSI oscillates around 50. Only one position per magic number may be open at any time, so the EA never stacks trades.

Exit Logic — Stop-Loss & Take-Profit

Risk is managed entirely with ATR-based bracket orders placed at entry. There is no trailing exit; each position runs to its stop or target:

- **Stop-Loss** = entry price $\mp$ `AtrSlMult × ATR(AtrPeriod)`
- **Take-Profit** = entry price $\pm$ `AtrTpMult × ATR(AtrPeriod)`

With the default multipliers (`AtrSlMult = 2.0` , `AtrTpMult = 3.0`) the target sits at 1.5× the stop distance — a **1.5 : 1 reward-to-risk** bracket that adapts automatically to current volatility. Position sizing is a fixed lot

value (`Lots`).

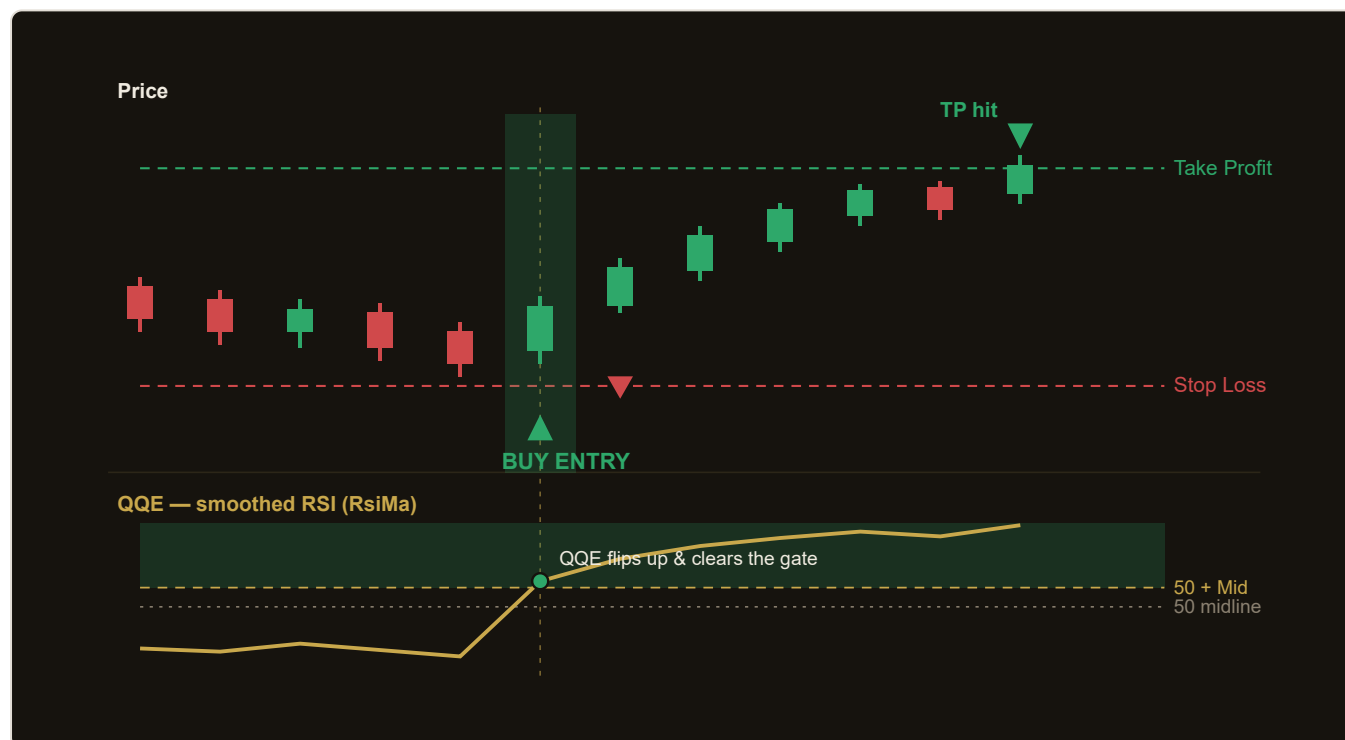
Warmup matters. The chained EMAs need time to settle. The EA holds fire until `RsiPeriod + SmoothFactor + WildersPeriod + 10` completed bars have been folded into the state (and the band has been seeded). The MQL5 build rebuilds this entire state each new bar over a generous convergence window, reproducing the C# incremental result bar-for-bar.

Execution Model

The EA acts strictly on **completed bars** — new-bar detection fires once per candle, and all signals are read from the just-closed bar (shift 1). This avoids intrabar repainting: a signal that appears is final. The strategy is single-timeframe and runs on whatever chart period it is attached to.

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.

In the illustration, price consolidates with a slight downward bias while the smoothed RSI languishes below the 50 midline. On the entry candle the QQE trend flips *up* and the smoothed RSI simultaneously vaults above the `50 + MidThreshold` gate — the two conditions that authorise a **long**. The stop-loss is placed `AtrSlMult × ATR` below entry and the take-profit `AtrTpMult × ATR` above, and the subsequent rally carries price to the target.

Parameters

Parameter	Default	Description
RsiPeriod	14	Wilder RSI length. The band-smoothing <i>WildersPeriod</i> is derived from it as $2 \times \text{RsiPeriod} - 1$. Range 5–30, step 1.
SmoothFactor	5	EMA smoothing factor applied to the RSI to form the smoothed RSI (<i>RsiMa</i>). Higher values give a calmer line. Range 2–12, step 1.
QqeFactor	4.236	Band-width multiplier on the smoothed ATR-of-RSI (the classic QQE default). Larger values widen the trailing band and slow trend flips. Range 2.0–6.0, step 0.25.
MidThreshold	2.0	Distance from the 50 midline that <i>RsiMa</i> must clear for a signal to count. Larger values demand stronger momentum. Range 0.0–15.0, step 1.0.
AtrPeriod	14	ATR length used to size the stop-loss and take-profit distances. Range 7–30, step 1.
AtrSIMult	2.0	Stop-loss distance in ATR multiples: stop = entry $\pm \text{AtrSIMult} \times \text{ATR}$. Range 1.0–4.0, step 0.5.
AtrTpMult	3.0	Take-profit distance in ATR multiples: target = entry $\pm \text{AtrTpMult} \times \text{ATR}$. Range 1.0–6.0, step 0.5.
Lots	0.10	Fixed trade volume in lots. Range 0.01–1.0, step 0.05.
Magic	5308	Magic number identifying this EA's positions. Used to enforce the one-position-at-a-time rule and to isolate the EA from other trades on the account.

Recommended Settings

The defaults are a balanced starting point built around the classic QQE constant of 4.236. The following notes describe how to bias the behaviour toward your trading style before optimising on a demo account.

HIGHER-TIMEFRAME TREND FOLLOWING (FEWER, CLEANER SIGNALS)

- Keep *RsiPeriod* = 14 and raise *SmoothFactor* toward 7–9 for a calmer smoothed RSI.
- Raise *MidThreshold* to 4–6 so only strongly-confirmed flips trade.
- Best suited to H1 and H4 charts on trending instruments.

FASTER, MORE RESPONSIVE (MORE SIGNALS)

- Lower *RsiPeriod* to 9–11 and *SmoothFactor* to 3–4.
- Reduce *QqeFactor* toward 2.5–3.5 to tighten the band and flip sooner.

- Keep `MidThreshold` low (0–2) — expect more whipsaw; test carefully.

Example — conservative H1 configuration

`RsiPeriod = 14` , `SmoothFactor = 8` , `QqeFactor = 4.236` , `MidThreshold = 5.0` , `AtrPeriod = 14` , `AtrSlMult = 2.0` , `AtrTpMult = 3.0` , `Lots = 0.10` . This demands a firm move away from neutral before committing and keeps a 1.5 : 1 volatility-scaled bracket.

Tip — balance the bracket to your win-rate. Trend-following QQE tends to win less often but larger. If your backtests show a high hit-rate but small average win, widen `AtrTpMult` to let winners run. If stops are hit prematurely on noise, raise `AtrSlMult` to give trades more room. Always re-optimize the pair together.

Always validate before going live. Backtest across several years and multiple instruments, then forward-test on a demo account. Optimised parameters that look perfect on historical data frequently fail to generalise. Use realistic spreads and commissions.

How to Install on MetaTrader 5

- 1 Copy `QqeTrailingBandCross.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

Finding the data folder. In MetaTrader 5 choose *File → Open Data Folder*, then navigate into `MQL5\Experts\` . After copying the file, right-click *Expert Advisors* in the Navigator and choose *Refresh* if the EA does not appear immediately.

Risk Warning

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