

Tested Level Breakout

Expert Advisor Documentation

PLATFORM	TYPE	TIMEFRAME	WEBSITE
MetaTrader 5 (MT5)	Breakout / Momentum	H1 (single timeframe)	www.algotbot.live

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Overview

Tested Level Breakout is a single-timeframe support & resistance engine that trades momentum breakouts of *proven* price levels. It uses no oscillators. Instead, it builds an objective map of horizontal levels directly from confirmed fractal swing pivots, then waits for one of those levels to be broken with conviction.

The core principle is selectivity: a level is only considered tradable once price has respected it several times. A shelf that has been touched repeatedly carries more significance than a one-off swing point, so the strategy only acts on the breakout of a level that has earned its place on the map. Each breakout must also be accompanied by a genuine range expansion, filtering out the marginal pokes that so often trap momentum traders.

Risk is defined structurally. The stop sits just beyond the broken level (or the breakout bar's own extreme), and the take-profit aims for the next mapped level in the breakout direction — capturing the natural level-to-level travel of price — with a fixed reward:risk multiple as a fallback. The EA holds only one position at a time and tags its orders with a configurable magic number.

How It Works

1. Mapping Levels from Fractal Pivots

On every newly closed bar, the strategy looks back `Fractal` bars to identify a **confirmed** swing pivot. A bar qualifies as a resistance pivot when its High is the strict maximum of all bars within the fractal window on each side; the mirror condition on the Low produces a support pivot.

- **Merging:** a new pivot that lands within an ATR-scaled tolerance (`TolAtrMult × ATR`) of an existing level is merged into it. The level's price is updated to a touch-weighted average and its *touch count* is incremented.
- **Significance:** because nearby pivots accumulate into a single level, a price shelf that has been respected several times builds up a high touch count — the EA's measure of how "tested" a level is.

2. Qualifying a Tested Level

A level becomes tradable only after it has been touched at least `MinTouches` times. Untested levels are tracked on the map but ignored for entries until they earn enough touches.

3. Entry — Momentum Breakout

An entry is only evaluated when the just-closed bar shows a genuine **range expansion**: its high-to-low range must be at least `ExpAtrMult × ATR`. If that filter passes:

- **BUY** — when price sat at or below a tested *resistance* on the prior close, and the just-closed bar closes clear above it by the break buffer (`BreakBuffer × ATR`). If several resistances are cleared at once, the strategy takes the strongest (highest) cleared shelf.
- **SELL** — the exact mirror through a tested *support*: prior close at or above the level, and the just-closed bar closes clear below it by the break buffer. The strongest (lowest) cleared support is chosen.

Why the buffer and expansion filter? The break buffer keeps marginal pokes just past a level from counting as breakouts, while the expansion requirement ensures the breakout is driven by real momentum rather than a quiet drift. Together they bias the EA toward decisive, high-conviction breaks.

4. Exits — Stops and Targets

- **Stop Loss:** placed just beyond the broken level or the breakout bar's own extreme — whichever is further — offset by the ATR break buffer. For a buy, that is `min(broken level, breakout low) - buffer`; for a sell it mirrors above.
- **Take Profit:** the *next mapped level* in the breakout direction (level-to-level travel). If no further level is mapped, or the next level is closer than 1R, the EA falls back to a fixed `RewardRisk` multiple of the measured risk.

5. Level Lifecycle & Position Management

- **Expiry:** a level that has not been touched within `LevelLifetime` bars is removed from the map, keeping it focused on currently relevant structure.
- **Flip-off:** once a level is broken and traded, it is removed from the map in the breakout direction — a broken resistance no longer acts as resistance.
- **One at a time:** the EA holds a single position, identified by its `Magic` number, and will not open a new trade while one is live.

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

Price repeatedly tests the gold resistance shelf (three touches, marked in gold). On the fourth approach, a large expansion candle closes clear above the level — the breakout. The EA buys, sets its stop just below the broken level, and targets the next mapped level above. Price travels level-to-level into the take-profit.

Parameters

Parameter	Default	Description
Fractal	3	Fractal half-width — the number of bars required on each side of a swing pivot for it to confirm. Higher values produce fewer, more significant levels. Range 2–6.
MinTouches	2	Number of touches a level must accumulate before it becomes tradable. Higher values demand more "tested" levels. Range 1–4.
AtrPeriod	14	Averaging period for the ATR used to scale tolerance, break buffer, and expansion thresholds. Range 7–28.
ToIAtrMult	0.50	Merge tolerance as a multiple of ATR. Pivots landing within this band of an existing level are merged into it. Range 0.10–1.50.
BreakBuffer	0.10	Break buffer as a multiple of ATR — how far past a level the close must clear to count as a breakout. Range 0.00–0.50.
ExpAtrMult	1.20	Expansion threshold — the breakout bar's range must be at least this multiple of ATR. Filters out low-momentum breaks. Range 0.80–2.50.
RewardRisk	2.00	Fallback reward:risk multiple, used for the take-profit when no further mapped level is suitable. Range 1.00–4.00.
LevelLifetime	200	Number of bars a level may go untouched before it expires and is removed from the map. Range 50–500.
Lots	0.10	Fixed trade volume in lots. Range 0.01–1.00.
Magic	5117	Magic number used to tag and identify this EA's positions. Use a unique value per chart if running multiple EAs.

Recommended Settings

Tested Level Breakout is designed for instruments that build clean, repeatedly respected horizontal structure. It performs best where breakouts tend to run rather than immediately revert.

- **Timeframe:** H1 is the natural home for this engine; H4 also works well for slower, more deliberate structure. Avoid very low timeframes where fractal "levels" are noisy.
- **Instruments:** major FX pairs and liquid indices that form well-defined support/resistance shelves.
- **Defaults:** the shipped values (Fractal 3, MinTouches 2, ATR 14, ExpAtrMult 1.20, RewardRisk 2.00) are a balanced starting point.

Tuning tips. For fewer but higher-quality signals, raise `MinTouches` to 3 and `Fractal` to 4. In choppy conditions, increase `BreakBuffer` and `ExpAtrMult` to demand stronger, cleaner breaks. Always re-optimize and forward-test on the specific symbol and timeframe you intend to trade.

Validate before going live. Backtest across multiple market regimes and run an extended demo / forward test before committing real capital. Parameter values that look optimal on historical data may not persist out of sample.

How to Install on MetaTrader 5

- 1 Copy `TestedLevelBreakout.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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