

Zone Grader

Support & Resistance — graded zones: Verified, Untested and Turncoat, with multi-timeframe display, alerts and an EA interface

User Manual • Version 3.13

This manual covers what the indicator draws on the chart, how each zone is built and graded, and every setting available. No programming knowledge is required.

Item	Detail
Platforms	MetaTrader 4 and MetaTrader 5
Type	Chart-window indicator: graded support and resistance zones
Engine	Fractal swing detection with ATR-scaled zone bands
Publisher	GEMA Dev

1. Overview

The indicator scans your chart history and draws the price areas where the market has repeatedly reacted. It draws bands rather than single lines, because real reactions rarely happen at one exact price, and it grades every band by how much that level has proved itself.

- **Graded zones** — every zone is labelled Verified, Untested or Turncoat, so you can tell at a glance which levels deserve attention.
- **Automatic detection** — zones are rebuilt on every new bar from the swing highs and lows in your history.
- **Multi-timeframe** — display higher-timeframe zones on a lower chart.
- **Alerts** — pop-up, push or e-mail when price enters a displayed zone. Off by default.
- **Fractal arrows** — optional display of the raw swings the zones are built from.
- **EA interface** — the nearest support and resistance are published in indicator buffers, readable by an Expert Advisor (section 9).

The MT4 and MT5 builds share the same detection engine: identical settings apply identical rules. Small differences in the number or the width of the zones can still appear, because the two terminals do not build their candles the same way — see section 10.

2. Installation

1. In the terminal, open File → Open Data Folder.
2. Open the MQL4 (or MQL5) folder, then the Indicators sub-folder.
3. Copy ZoneGrader.ex4 (or ZoneGrader.ex5) into it.
4. Restart the terminal, or right-click the Navigator panel and choose Refresh.
5. Drag ZoneGrader from the Navigator onto a chart and click OK.

An .ex4 file will not work in MT5, and an .ex5 file will not work in MT4. Install the file matching your platform.

3. Quick Start

Attach the indicator with its default settings. Coloured bands appear: green shades below price are support, red and purple shades above are resistance. Each band carries a text label to its right, for example Verified Support (2 tests). The defaults suit most instruments and timeframes: all three grades displayed, fractal arrows hidden, alerts off, and only the five nearest zones on each side of price drawn so the chart stays readable.

The chart right margin is the only chart property the indicator changes. It is switched on so the zone labels stay visible next to the most recent candles, and it is restored to its previous state when the indicator is removed. Grid, period separators, OHLC header and volumes are left exactly as you set them.

4. How It Works

4.1 Fractals — the building blocks

A fractal is a local turning point: a bar whose high is higher than the bars around it (a swing high), or whose low is lower than the bars around it (a swing low). These are the points where the market changed direction, which is why they are the raw material for support and resistance.

- **Fast fractals** — detected over a short window, 7 bars on each side by default. They capture the many small recent swings and act as the candidate touches used to validate a zone.
- **Slow fractals** — detected over a longer window, 15 bars on each side. They mark the major swings and create the structurally significant levels.

Both windows are set directly in bars and do not depend on the timeframe you trade. A wider window means fewer but more significant fractals. The slow window can never be narrower than the fast one, so every slow fractal is also a fast fractal.

4.2 How a zone is built

A price band is built around each fractal. Its thickness comes from current volatility, measured with the Average True Range, and from the Zone thickness factor setting. That tolerance margin is why a zone is a band rather than a line: it absorbs the small overshoots that always occur around a real level.

The engine then walks forward through history and checks how price behaved around that band:

- Each time price returns into the band and reacts, the zone records a validated test. About ten bars must separate two tests, so the same swing is never counted twice.
- The level is broken only when a bar closes beyond the band. A wick that pierces the band without closing beyond it does not break the level — that is exactly what a healthy test looks like.
- A broken level may reverse its role once: it becomes a Turncoat and its test count is reset, so it has to prove itself again from its new side. Broken a second time, it is discarded for good.
- Overlapping zones are merged into a single wider band to keep the chart readable. A merge never invents a test: the count shown always reflects real reactions.

Each surviving zone is finally typed as Support or Resistance depending on whether current price sits above it or below it.

4.3 Zone grades

Every zone is graded, and the grade is carried by both the zone colour and its on-chart label.

Grade	Meaning	What it tells you
Verified	Tested one to three times, and held.	The most trustworthy level — proven reactions. Prime area for trade decisions.
Untested	Formed on a significant (slow) swing, not retested yet.	A fresh, potentially strong level. Unproven, so treat the first touch with care.
Turncoat	Broken once and now working from the other side, not retested yet.	A role-reversal level awaiting its retest. If price respects it from the new side, it is re-graded Verified.

The number of validated tests is appended to the label of a Verified zone, for example (2 tests). A level tested more than three times is considered worn out and is no longer displayed. Untested and Turncoat zones carry no test count by definition — neither has been confirmed yet.

4.4 Support, resistance and the colour code

Support zones use green shades and resistance zones use red and purple shades; within each family the exact colour reflects the grade. These are the factory colours and all of them can be changed in the settings.

Grade	Support	Resistance
Untested	Sea Green	Orchid
Verified	Green	Crimson
Turncoat	Olive Drab	Dark Orange

Any grade you do not want to see can be hidden from the settings. A hidden grade also stops firing alerts.

5. Trading the Zones

The zones are decision areas, not exact entry prices. Expect a reaction when price reaches a zone, and let price confirm before committing.

- **Verified — your reference levels.** Wait for a reversal signal inside the band before entering. Place the stop-loss beyond the far edge of the band, so that normal overshoot inside it does not stop you out. They also make logical take-profit targets for trades running from other levels.
- **Untested — fresh, unproven.** Treat the first touch as a probe: the reaction can be strong, but the level has not been confirmed, so wait for a clear rejection. They are excellent for anticipation — set an alert and plan in advance. Once touched and held, the zone is re-graded Verified on the next recalculation.
- **Turncoat — the retest area.** After a breakout, this is often the cleanest place to join the new direction. If the level holds it becomes Verified, and that re-grade is your confirmation that the breakout was genuine. If it fails, the level is broken a second time and disappears altogether — a Turncoat that vanishes without ever turning Verified is telling you the breakout was a false spike.

Three habits that make the tool work harder:

- **Combine timeframes.** Plot higher-timeframe zones on your trading chart and take only the entries that align with those larger levels.
- **Adapt to the instrument.** On a choppy symbol, raise the Zone thickness factor so that normal noise stays inside the band.
- **Declutter with the display settings, not the detection ones.** If the chart is too busy, lower Max zones per side or use the Max zone distance filter — never the fractal windows.

6. Fractal Arrows

Enable Draw the fractal arrows to display the raw swing points the zones are built from. This makes the engine fully transparent: you see exactly which highs and lows feed it.

- Up arrows mark swing highs, down arrows mark swing lows.
- Large arrows are slow fractals (major swings), small arrows are fast fractals (minor swings). Because every slow fractal is also a fast one, a major swing shows a large arrow with a small one on the same bar — a quick visual hierarchy.

Use them to understand your zones — clustered arrows around one price explain why a strong zone appears there — and to read market structure: a rising sequence of slow swing highs and lows is an uptrend, and trading the zones in the direction of that structure is the safer side.

In multi-timeframe mode the arrows are projected onto your chart: a swing detected on the higher working timeframe is placed on the chart candle that holds the actual high or low, so an arrow always sits on the correct candle.

If the chart simply looks crowded, do not widen the fractal windows: testing showed that it destroys the valuable Verified and Turncoat zones faster than it removes clutter. Readability is a display matter — use Max zones per side instead.

7. Multi-Timeframe Mode

Set the Working timeframe to a value higher than your chart to calculate the zones on that higher timeframe while trading on the lower one. On an M15 chart with the working timeframe set to H4, you see the major H4 zones drawn over your M15 candles — ideal for using higher-timeframe levels as decision areas for lower-timeframe entries.

- The working timeframe must be equal to or higher than the chart timeframe. A lower value falls back to the chart timeframe, reported in the terminal journal, so you always know which timeframe is really being used.
- Each zone label then carries a suffix such as [H4], so the origin of a zone is never ambiguous.
- A zone born before the oldest candle your chart holds is drawn from the left edge of the chart. Its band and its grade are unaffected — only the visible starting point of the rectangle is.
- Right after a timeframe change the zones may take a second to appear while the higher timeframe history loads. This is normal and handled automatically.

Each copy of the indicator keeps its own chart objects, so several instances can run on the same chart with different working timeframes — H4 and H1 zones side by side, for example.

8. Alerts

Every alert channel is switched off in the factory settings. Once enabled, an alert fires when price enters a displayed zone. Only the grades you have chosen to display can trigger an alert, and so can only the zones that survive the Max zones per side and Max zone distance filters.

- **Pop-up alert** — an on-screen alert window inside the terminal.
- **Push notification** — sent to the MetaTrader mobile app. Requires your MetaQuotes ID in Tools → Options → Notifications.
- **E-mail alert** — requires a working e-mail configuration in Tools → Options → Email.
- **Minimum delay between alerts** — anti-spam guard: once an alert has fired, no new one is sent until the delay has elapsed.

No alert is fired inside the Strategy Tester — backtest, optimisation or visual mode — so a test run is never

interrupted by a pop-up.

9. EA Interface

The nearest support and the nearest resistance are published in indicator buffers, so an Expert Advisor can read the levels without reimplementing the detection. The values are refreshed on every tick and read at bar index 0.

Buffer	Content
4	Nearest support — upper edge
5	Nearest support — lower edge
6	Nearest resistance — upper edge
7	Nearest resistance — lower edge
8	Nearest support — grade code
9	Nearest resistance — grade code
10	Nearest support — number of validated tests
11	Nearest resistance — number of validated tests

Grade codes: 1 Possible, 2 Turncoat, 3 Untested, 4 Verified, 5 Weak. A value of 0 in any buffer means there is no zone on that side.

Buffers 0 to 3 carry the fractal arrows and are for display only. Read the buffers with iCustom in MT4, and with CopyBuffer on an iCustom handle in MT5. Only the zones actually displayed are published, so the display filters of section 11 also shape what an EA sees.

10. Notes & Limitations

- **Zones are recalculated on each new bar of the working timeframe** and may shift slightly as new history is confirmed. This is expected behaviour for any adaptive support and resistance tool.
- **MT4 and MT5 may not show exactly the same zones.** Both builds run the same engine and the same rules, but MT4 serves its own stored history while MT5 rebuilds the higher timeframes from one-minute data, so the candles handed to the engine can differ slightly — most visibly on H1. No setting removes this. On MT4, check that the working timeframe itself is complete: open Tools → History Center (F2), select the symbol and that timeframe, and re-download it if the number of records looks short.
- **Support and resistance describe probabilities, not guarantees.** No indicator removes the need for sound risk management and a stop-loss.
- **Performance depends on the number of zones drawn** far more than on the amount of history analysed. The calculation itself is fast on both platforms, even over 20 000 bars and in multi-timeframe mode; what makes a chart feel heavy is the number of rectangles and labels. Lowering Max zones per side is the effective remedy. MT5 redraws chart objects more slowly than MT4 when many zones are displayed at once.
- **The chart right margin is the only property the indicator changes**, and it is restored to its previous state when the indicator is removed.

11. Settings Reference

Every setting available in the indicator's Inputs tab, grouped exactly as it appears there.

Main settings

Setting	Description	Default
Working timeframe	Timeframe used to calculate the zones. Current uses the chart's own timeframe; choose a higher one to project major zones onto a lower chart. A timeframe lower than the chart's falls back to the chart timeframe and is reported in the terminal journal.	Current
Max bars of history	Maximum number of past bars analysed. A higher value finds older zones but is slower. Raising it is not a way to put more zones on the chart: what is displayed is capped by Max zones per side, and the effective depth is bounded by the history your terminal really holds.	5000
Enable chart right margin	Switches on the chart right margin, where the zone labels are drawn. It is restored to its previous state when the indicator is removed. Turn it off only if you bring the labels back over the candles with Label offset right of price.	true

Show zones

Setting	Description	Default
Show untested zones	Display the zones formed on a significant swing but not retested yet.	true
Show verified zones	Display the zones confirmed by one to three validated tests.	true
Show turncoat zones	Display the role-reversal zones.	true
Max zone distance	Hide the zones farther from the current price than this many times the current volatility (ATR). Keeps only the levels price can realistically reach. 0 disables the filter.	0
Max zones per side	Display only the N nearest zones below price and the N nearest above it — the main readability control. A zone that currently contains price is always shown. 0 means no limit.	5

A zone hidden by any of these settings is fully silent: it is neither drawn, nor labelled, nor able to fire an alert, nor published to the EA interface.

Style zones

Setting	Description	Default
Zone label font name	Font used for the text label shown next to each zone. Any font installed on your system.	Calibri Light
Zone label font size	Size of that label, in points.	9
Zone label colour	Colour of the label text. Left on None it is automatic: the colour is derived from the chart background, light text on a dark chart and dark text on a light one.	None (auto)
Fill zone rectangles	Fill the zones with colour, or draw only their outline. Outline-only keeps the candles fully visible inside a zone.	true
Zone border width	Thickness, in pixels, of the rectangle outline.	1

Setting	Description	Default
Zone border style	0 = solid, 1 = dashed, 2 = dotted, 3 = dash-dot, 4 = dash-dot-dot. MetaTrader only draws a style other than solid when the border width is 1.	0
Label offset right of price	Horizontal distance between the last candle and the zone labels, counted in chart candles.	5

Fractals

Setting	Description	Default
Draw the fractal arrows	Display the fast and slow swing arrows on the chart (section 6).	false
Zone thickness factor	Height of each zone band relative to current volatility. A higher value gives thicker zones and more tolerance; a lower value gives tighter zones.	0.75
Fast fractal window	Detection window of the minor swings, in bars on each side of the candidate bar. These are used as candidate touches.	7
Slow fractal window	Detection window of the major swings, in bars on each side. These create the structurally significant levels. Cannot be narrower than the fast window.	15

The two fractal windows are the only settings that change which zones are detected. Every other setting only changes how the detected zones are shown. Use them to fit the engine to an instrument, never to tidy up the chart.

Alerts

Setting	Description	Default
Pop-up alert	Show an alert window when price enters a displayed zone.	false
Push notification	Send a notification to the MetaTrader mobile app on zone entry. Requires your MetaQuotes ID in the terminal options.	false
E-mail alert	Send an e-mail on zone entry. Requires a working e-mail setup in the terminal options.	false
Minimum delay between alerts	Anti-spam guard, in seconds, between two alerts.	300

Colour zones

One colour per grade and per side. Changing a colour has no effect on detection — it only changes how the zone is drawn.

Setting	Description	Default
Support — Untested	Colour of an untested support zone.	Sea Green
Support — Verified	Colour of a verified support zone (1 to 3 tests).	Green
Support — Turncoat	Colour of a support zone that came from a role reversal.	Olive Drab
Resistance — Untested	Colour of an untested resistance zone.	Orchid
Resistance — Verified	Colour of a verified resistance zone (1 to 3 tests).	Crimson

Setting	Description	Default
Resistance — Turncoat	Colour of a resistance zone that came from a role reversal.	Dark Orange

Four further colour entries are listed in the same group — Possible and Weak, for support and for resistance. Those two grades are internal to the engine and are never displayed in this version, so their colours have no visible effect.