



TRADERSUITE · PROFESSIONAL INDICATOR SERIES

Kalman D7

The complete user guide — an adaptive dual-Kalman trend cloud, four-gate no-repaint signals and touch-graded support & resistance, on one clean chart.

v1.0.0

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How to read this guide

Sections 1–8 explain what you see on the chart and why. Section 9 is a full reference for every setting. Keep it open beside a chart on your instrument — each visual mirrors exactly what the indicator draws.

What this indicator does

Kalman D7 tracks the trend with two adaptive Kalman filters and shades the band between them — a cloud that tightens to price in clean trends and stays quiet in chop. Around that core it layers a conservative four-gate signal engine that prints one no-repaint arrow per swing, an automatic support & resistance map graded by how often price has actually respected each level, and a live panel that keeps the whole picture in one corner of the chart.

A cloud that adapts

The filters trust clean data and discount noisy data automatically, so the cloud hugs a trending market and loosens through churn — without you changing a setting.

One arrow per swing

A signal needs four conditions to hold at once — direction, thickness, slope and a close beyond the cloud — and prints only when the regime flips. Closed bars only; it never repaints.

Levels that earn their place

Pivot levels are merged, touch-counted and re-averaged. Levels the market keeps respecting are graded strong and marked with an asterisk.

One clean panel

Trend, both filter values, cloud thickness, level counts and licence status sit in a compact branded panel — no hunting across the chart.

Who it's for

Trend and momentum traders who want an adaptive read of direction without endlessly re-tuning a moving average — and level traders who want their support & resistance found, merged and graded automatically. Every threshold is normalised by ATR, so it behaves consistently on any instrument and timeframe NinjaTrader 8 can chart.

Futures (ES, NQ, GC, CL...)

Forex

Crypto

Stocks

Any timeframe — ATR-normalised

Closed bars only — no repaint

A note on honesty

The cloud describes the trend that exists *now* — it does not predict the next bar. An arrow is evidence that four conditions have aligned, not a promise about what follows. Nothing here forecasts the future; it organises evidence so you can make faster, better-informed decisions. Always combine it with your own risk management.

Installing it — step by step

Installation is the same for every TraderSuite indicator and takes about two minutes. You need NinjaTrader 8 (64-bit, 8.1 or later) and the .zip file from your purchase email or account download page.

- 1 **Download the zip — and leave it zipped.** NinjaTrader imports the whole archive; do not extract it first.
- 2 **Import into NinjaTrader.** In the Control Center choose **Tools → Import → NinjaScript Add-On...**, browse to the zip and confirm. If an older copy exists, remove it first so NinjaTrader compiles a single clean version.
- 3 **Restart NinjaTrader.** A restart after import guarantees the new assembly is loaded.
- 4 **Add it to a chart.** Right-click the chart → **Indicators...** → open the **TraderSuite** folder → double-click **TS_KalmanD7**.
- 5 **Enter your licence key.** In the indicator's settings find the **0A. License** group and paste the key from your purchase email. Leave it empty to start an automatic 7-day trial.
- 6 **Click OK and check the panel.** The panel's **License** line should read **✓ LICENSED, MEMBER** or **TRIAL**. Section 10 explains every state.

Requirements

NinjaTrader 8 (latest release recommended) · any chart instrument and timeframe · an internet connection for the first licence activation (7-day offline grace thereafter) · a valid TraderSuite licence key or active membership.

Moving machines?

Deactivate the old machine from your account dashboard first, then activate on the new one. Activations used/allowed are shown live on the panel.

Tip — save it in a template

Once your colours and settings feel right, right-click the chart → **Templates** → **Save as default** so every new chart opens ready to trade.

Anatomy of the chart

Everything the indicator draws, on one screen. Two adaptive lines with the cloud shaded between them, graded support & resistance bands behind price, arrows on confirmed flips, and the live panel in the corner.



- 1 **The cloud** — the shaded band between the two filters. Aqua = bullish, red = bearish.
- 2 **Fast line** — the more responsive Kalman filter. It turns first.
- 3 **Base line** — the steadier filter. Its slope is one of the four signal gates.
- 4 **Signal arrow** — printed at bar close when all four gates hold on a regime flip.
- 5 **Strong S/R zone** — gold band; the asterisk marks 3+ touches (e.g. 4512.50 *4).
- 6 **Weak S/R zone** — grey band with its touch count; drawn from 2 touches.
- 7 **Live panel** — licence, trend, cloud thickness, level counts, feature status.

The Kalman engine

A Kalman filter separates signal from noise — and adjusts how aggressively it does so as conditions change.

A moving average treats every bar identically. It has no notion of whether the market is trending cleanly or thrashing sideways, which is why any fixed-length average is always either too slow in trends or too jumpy in chop. A Kalman filter instead maintains an estimate of the true underlying level and updates it with each new bar — weighted by how much it currently **trusts** the data. When price tracks the estimate closely, it trusts it and follows quickly. When price scatters, it discounts it and holds steadier.

This implementation derives its trust measure from the squared difference between the smoothed input and the current estimate, normalised by ATR — so behaviour stays consistent across instruments and timeframes rather than being tied to absolute price.

The practical result

The filter tightens to price in clean trends and loosens through noise — without you changing a setting. That adaptation is the whole point.



Both filters read the same smoothed input; only their responsiveness differs. The gap between their outputs is the trend signal.

Price is smoothed once, then filtered twice at different responsiveness. The distance between the two outputs becomes the cloud.

The two filters are identical in construction and differ only in their **Q multiplier** — the fast filter's **0.005** against the base filter's **0.002**. A higher Q means more trust in new observations, so the fast line turns sooner. Everything the cloud expresses comes from that single asymmetry.

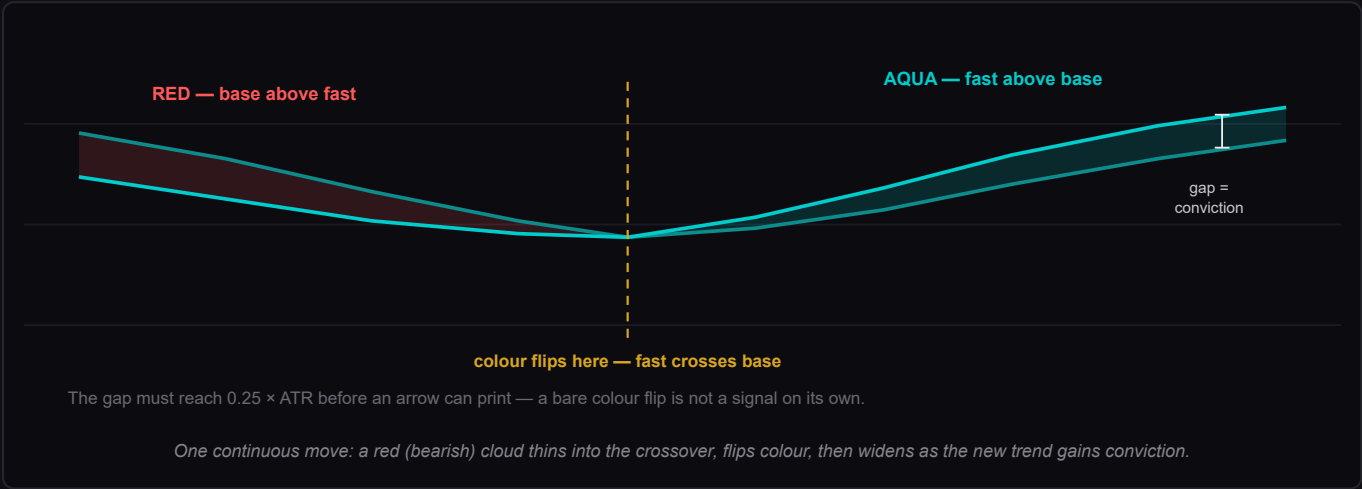
The fractional double EMA

Before either filter sees price, it passes through two chained EMAs whose factors default to **0.5**. They are deliberately *fractional* — smaller than a conventional period — so the pre-smoothing strips tick noise without adding meaningful lag before the Kalman stage does the real work. **Show fractional EMA** is off by default; switch it on to see that intermediate stage plotted.

Reading the cloud

Colour gives direction. Thickness gives conviction.

State	Appearance	Reading
Fast above base	Aqua fill	Upward momentum leading the trend.
Base above fast	Red fill	Downward momentum leading.
Thick cloud	Wide band	The two horizons agree strongly — directional conviction.
Thin cloud	Narrow band	Little separation — indecision or transition.



▲ AQUA · THICK

— THIN

▼ RED · THICK

Bullish, with convictionTransition — stand byBearish, with conviction

The colour flip is the earliest read available, but it is also the least reliable in isolation — which is precisely why signals require three further conditions before an arrow prints (Section 06). **Fill opacity** defaults to **22**, keeping candles legible through the shading; raise it for a bolder cloud, lower it for a subtler one.

The four signal gates

An arrow requires all four conditions to hold at once — and prints only when the regime changes. One signal per swing, not a stream.

Buy signal — all four gates must hold

1 Direction

fast line above base line

2 Thickness

cloud gap $\geq 0.25 \times \text{ATR}$

3 Slope

base rising over 3 bars

4 Price

close above the cloud

BUY ARROW — on the regime flip only

Sell signals mirror all four gates exactly. Because arrows print only on a regime change, you get one signal per swing.

Gate	Buy arrow	Sell arrow
Direction	Fast line above base line.	Fast line below base line.
Thickness	Cloud gap at least $0.25 \times \text{ATR}$ — the same conviction bar for both sides.	
Slope	Base line rising over the last 3 bars.	Base line falling over the last 3 bars.
Price	Bar closes above the cloud.	Bar closes below the cloud.

Gate 4 is what separates this from a typical cloud indicator

Requiring price to **close beyond the cloud** — not merely for the lines to cross — filters out the crossovers that occur while price is still churning inside the band.

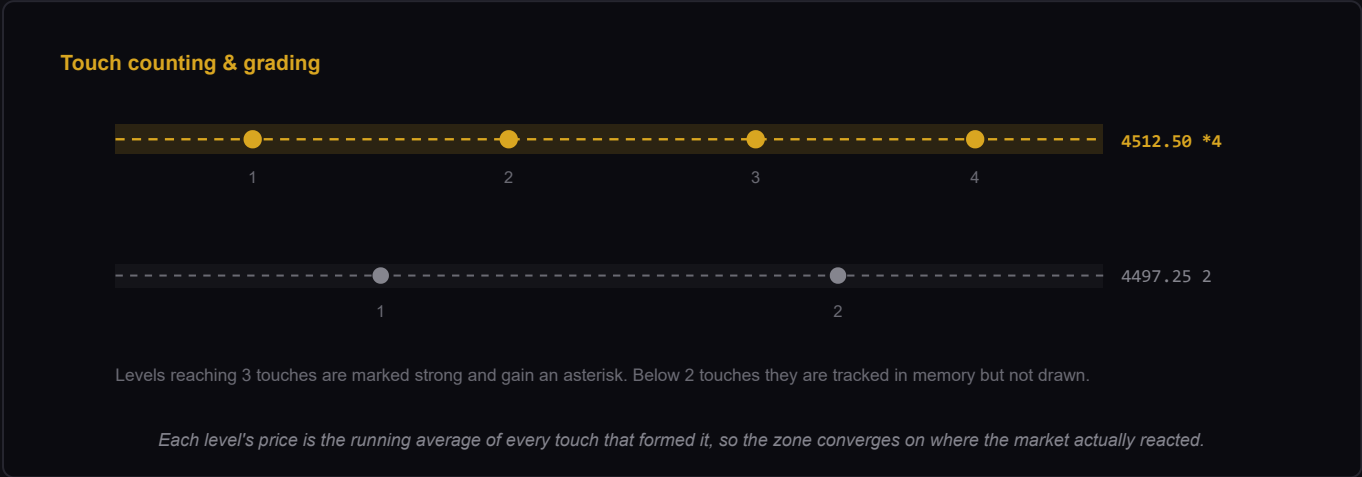
Two things worth knowing up front

Signals need **14 + Slope** **lookback** bars of history before they can fire — the ATR and slope measurements must be valid first. And **alerts are off by default**: **Enable alerts** must be switched on before any sound plays (default sound **Alert1.wav**).

Support & resistance zones

Pivot levels graded by how often price has actually respected them.

Confirmed pivots — **Pivot strength** of 12 bars either side by default — seed candidate levels. Rather than piling up one line per pivot, nearby levels are **merged**: any new pivot within **Merge tolerance** ($0.40 \times \text{ATR}$) of an existing level is folded into it. The level's touch count goes up, and its price is re-averaged across every touch — so each zone settles on the price the market has actually respected.



Control	Default	Effect
Min touches to show	2	Below this, a level is tracked but not drawn.
Strong = touches $\geq$	3	At or above this, the level is graded strong and gains its asterisk.
Zone height ($\times \text{ATR}$)	0.18	How tall each zone is drawn — a band, not a hairline.
Max levels shown	6	Only the most-touched levels are kept on the chart.
Max distance ($\times \text{ATR}$)	0 = off	Optionally hide levels far from current price.

Each label prints the level price followed by its touch count — 4512.50 *4 for a strong level, 4497.25 2 for a weaker one. Strong zones draw in gold, weaker ones in grey, so the levels that have earned respect stand out at a glance.

Tuning & the live panel

Three controls per filter. Change one at a time, and re-judge the cloud before touching the next.

Control	Default	What raising it does
Q multiplier	0.002 base · 0.005 fast	More trust in new data — the line turns sooner and tracks price more closely, at the cost of more whipsaw. The primary responsiveness dial.
R	50 both	Longer averaging window for the noise estimate. The filter's adaptation itself becomes smoother and slower to react to regime change.
R gate	1.0 both	Caps how far the noise estimate can swing, so a single violent bar cannot destabilise the filter.

Keep the asymmetry

The cloud only exists because the fast filter's Q multiplier exceeds the base filter's. Set them equal and the two lines converge — no cloud, no signals. If you raise one, raise the other proportionally.

The live panel

tradersuite.online
TS_KalmanD7 v1.0.0
— LICENSE STATUS —
License: ✓ **LICENSED**
— TREND —
Trend: ▲ **BULL**
Base: 4498.25
Fast: 4503.75
Cloud: **5.50**
— S/R LEVELS —
Tracked: 11
Strong: 3
Signals: ON
Levels: ON

- Licence & activation state at a glance
- Trend — the current regime, from the cloud's direction
- Base & Fast — the two filter values; their difference is the cloud
- Cloud — current thickness, to compare against $0.25 \times \text{ATR}$
- Tracked — levels held in memory, including undrawn ones
- Strong — levels at or past the strong-touch threshold
- Signals / Levels — which display features are active

Tuning & the live panel

Reading it at a glance

Trend tells you which side to prefer. **Cloud** tells you whether conviction is there — if it sits persistently below $0.25 \times \text{ATR}$, no arrow can fire. **Tracked** and **Strong** tell you how mature the level map on this chart is.

Settings reference

Every option, grouped exactly as it appears in the NinjaTrader indicator dialog.

0. About & 0A. License

Option	Default	What it does
Website	tradersuite.online	Displayed on the panel. Informational.
Show Logo	On	Show the TraderSuite branding on the panel.
Show Panel	On	Master toggle for the live panel.
License Key	(empty)	Your key. Leave empty to start the automatic 7-day trial.

1. EMA Settings

Option	Default	What it does
Show fractional EMA	Off	Plot the intermediate smoothing stage on the chart.
EMA factor 1	0.5	First smoothing factor applied to price.
EMA factor 2	0.5	Second factor, applied to the first EMA's output.

2. Kalman Settings

Option	Default	What it does
R base	50	Averaging window for the base filter's noise estimate.
Q multiplier base	0.002	Base filter responsiveness. The steadier of the two.
R gate base	1.0	Cap on the base filter's noise estimate.
R fast	50	Averaging window for the fast filter's noise estimate.
Q multiplier fast	0.005	Fast filter responsiveness. Must exceed the base value.
R gate fast	1.0	Cap on the fast filter's noise estimate.

The defaults are a sensible starting point

Load several hundred bars so the ATR and moving-average components are valid, then adjust one value at a time — and always keep the fast filter more responsive than the base filter.

Signals, S/R Levels & Visual

3. Signals

Option	Default	What it does
Show buy/sell signals	On	Print arrows on confirmed regime flips.
Cloud thickness (× ATR)	0.25	Minimum cloud width for a signal. The main sensitivity control.
Slope lookback (bars)	3	Bars used to measure whether the base line is genuinely sloping.
Enable alerts	Off	Master switch for audible alerts.
Alert sound file	Alert1.wav	Any .wav in NinjaTrader's sounds folder.

4. S/R Levels

Option	Default	What it does
Show S/R levels	On	Draw the pivot zones.
Pivot strength (bars)	12	Bars either side needed to confirm a pivot.
Strong = touches ≥	3	Touch count at which a level is graded strong.
Zone height (× ATR)	0.18	Drawn height of each zone.
Merge tolerance (× ATR)	0.40	How close pivots must be to merge into one level.
Max levels shown	6	Cap on drawn levels, most-touched first.
Min touches to show	2	Minimum touches before a level is drawn.
Max distance (× ATR)	0	Hide levels far from price. 0 disables the filter.

5. Visual

Option	Default	What it does
Fill opacity	22	Cloud shading strength, 0–100.
Up fill (fast > base)	Aqua	Cloud colour when momentum leads upward.
Down fill (base > fast)	Red	Cloud colour when momentum leads downward.

Remember — alerts are separate from signals

Show `buy/sell signals` controls the arrows on the chart. `Enable alerts` controls the sound — and it ships off. Turn both on if you want to hear a flip as well as see it.

Licensing & activation

The indicator validates once, then caches for 24 hours and keeps working offline within a grace window — so a brief internet drop never interrupts your session.

Getting started

- 1 Add **TS_KalmanD7** to your chart (Indicators dialog → TraderSuite folder).
- 2 Open its settings and find the **0A. License** group.
- 3 Paste your **License Key** — or leave it empty to start an automatic 7-day trial.
- 4 Click OK. The panel's **License** line confirms your status.

License states you may see

Panel shows	Meaning
✓ LICENSED	Valid product licence, activated on this machine.
✓ MEMBER	Active membership licence.
✓ ADMIN	Administrator master key (support / testing).
TRIAL (Xd left)	Free trial, days remaining shown.
OFFLINE MODE	Server unreachable; running on the offline grace period.
✗ message	Attention needed — invalid key, max activations, expired, or internet required.

Activations

A product licence activates on a limited number of machines (shown as **used / max** on the panel). Need to move machines? Deactivate the old one from your account, then activate the new one.

Trading with it — a workflow

A simple, repeatable way to use the tool. This is an educational framework, **not financial advice** — always apply your own plan and risk limits.

- 1 **Read the regime.** Check the panel's **Trend** line and the cloud's colour — aqua favours longs, red favours shorts. Trade with it, not against it.
- 2 **Judge conviction.** A thick cloud means both horizons agree. Compare the panel's **Cloud** value against $0.25 \times \text{ATR}$ — while it is thinner, treat the market as undecided and stand by.
- 3 **Wait for the arrow.** All four gates, measured on a closed bar, only on a regime flip. Because nothing repaints, there is no reason to act on a half-formed crossover mid-bar.
- 4 **Check the level map.** Where is the nearest strong (*) zone? Ahead of the signal it is your first objective — and your first obstacle. Behind it, it is context for your stop.
- 5 **Execute with your plan.** If you take the trade, place risk beyond the cloud or the nearest strong level — a structural invalidation point, not an arbitrary tick count.
- 6 **Manage with the cloud.** A thinning cloud means conviction is fading; an opposite arrow means the regime has flipped — respect it rather than argue with it.

Confluence is king

The strongest setups are where several signals agree — a fresh arrow, a cloud comfortably past the thickness gate, and a strong (*) level sitting behind the trade rather than in front of it.

Avoid

Acting on colour flips alone, taking arrows straight into a strong opposing level, or setting the two Q multipliers equal — that collapses the cloud and silences every signal.

What this indicator is not

Being clear about limits is part of being useful. Kalman D7 is an analytical charting tool — here is what it does **not** do, on purpose.

- **It is not a signal service.** It does not tell you when to buy or sell. It maps the trend, its conviction and the levels around it; the decision — and the responsibility — stays with you.
- **It does not predict the future.** The cloud describes the regime that exists now, and levels mark where price has reacted before. Any regime can end and any level can break — the arrows that get stopped out prove it.
- **It does not promise profits.** No indicator does. Past behaviour of a trend, filter or level does not guarantee future results.
- **It is not an automated strategy.** It places no orders and manages no positions. It draws context on your chart; execution is entirely yours.
- **It is not financial advice.** Everything in this guide is educational. Consult a qualified professional before making investment decisions.

Risk disclosure

Trading futures, foreign exchange and other leveraged products involves substantial risk of loss and is not suitable for every investor. Only trade with capital you can afford to lose. Hypothetical or simulated examples in this guide have inherent limitations and do not represent actual trading.

What it is

A disciplined way to keep an adaptive trend read, its conviction, graded support & resistance and confirmed regime flips on one clean chart — so your preparation is faster and your decisions are better informed.

Troubleshooting & FAQ

► The indicator doesn't appear in the Indicators list

Check the import finished without errors (Tools → Import → NinjaScript Add-On), then restart NinjaTrader. It lives in the **TraderSuite** folder of the Indicators dialog, not the top level.

► Compilation error after import

Delete any older copy of the file first, then re-import so NinjaTrader compiles a single clean version.

► Does it repaint?

No. Everything runs on closed bars (**Calculate.OnBarClose**). Arrows print at the close and stay where they printed.

► No arrows are printing

Usually the thickness gate. Compare the panel's **Cloud** value against $0.25 \times \text{ATR}$ — if the cloud is persistently thinner, no arrow can fire. Lower **Cloud thickness**, and check at least **14 + Slope lookback** bars have loaded.

► Signals show, but no sound plays

Enable alerts is off by default, independently of **Show buy/sell signals**. Switch it on; the default sound is Alert1.wav.

► The cloud disappeared

The two filters have converged — normal in transitions. If it never appears, check that the fast Q multiplier still exceeds the base one.

► Too many arrows on my chart

Raise **Cloud thickness**, increase **Slope lookback**, or lower the fast Q multiplier.

► Too few S/R levels

Lower **Pivot strength** for more pivots, or **Min touches to show** to draw younger levels. Raising **Merge tolerance** also consolidates more pivots into each level, growing touch counts faster.

► Panel says X Internet required

The first validation of a new key needs a connection. Once validated it caches for 24 h and rides an offline grace period after that.

► Panel says X Max activations reached

Your key is active on its maximum number of machines. Deactivate an old machine from your account dashboard, then activate this one.

Still stuck?

Email completetradersuite@gmail.com with your NinjaTrader version, the indicator version from the panel, and a screenshot. The TraderSuite Team will get you running.

Changelog

What changed in each release. Update through your account download page — import the new zip over the old version (delete the old file if NinjaTrader reports a duplicate).

Version	Notes
v1.0.0	Current build — the initial release. Adaptive dual-Kalman trend cloud with fractional double-EMA pre-smoothing, four-gate no-repaint signals, touch-graded support & resistance zones, live stats panel, configurable alerts and TraderSuite licensing.

Staying current

Licence holders get every update free. The panel shows your installed version; compare it with the version on the product page whenever you like.

Acknowledgement

The Kalman filtering approach is adapted from the "Kalman D7" concept by et20tradeview (MPL-2.0), reimplemented natively for NinjaScript by TraderSuite.



TraderSuite

Thank you for trading with Kalman D7. For the latest build, video walkthroughs and support, visit us online.

Web tradersuite.online

Email completetradersuite@gmail.com