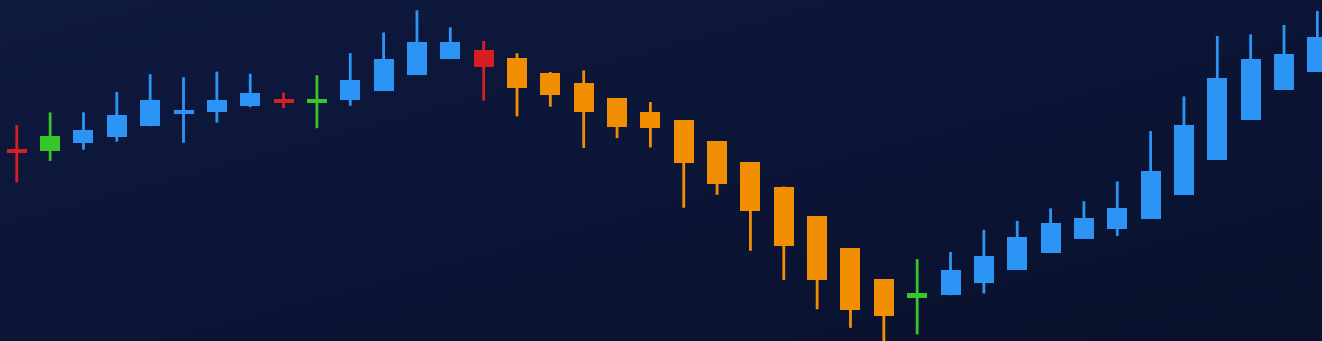


CRYSTAL HA SIGNALS

Heikin Ashi trend engine for MetaTrader 5

Trade the **trend**.
Not the **noise**.

Pure price action, smoothed by Heikin Ashi, confirmed on closed candles and scanned across every timeframe and symbol you trade. This manual explains every signal, every panel state and every setting — so you can read the chart with confidence from the first minute.



Closed-candle signals

No repaint

MTF panel

Market scanner

Click-to-open

EA ready buffers

Product Crystal HA Signals for MetaTrader 5

Publisher Crystal AI Systems

MQL5 mql5.com/en/users/jawadtrader22

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IF YOU ONLY HAVE TEN MINUTES

- **Chapter 3** — attach the indicator and check the two panels appear.
- **Chapter 4** — learn the difference between a circle (early) and an arrow (confirmed).
- **Chapter 12** — learn to read BULLISH / BEARISH, BUY / SELL / WAIT and the NEW tag.
- **Chapter 14** — copy the preset that matches your trading style.

Introduction

One chart. Every timeframe. Every market.

Crystal HA Signals replaces noisy candles with clean Heikin Ashi trend candles, marks every momentum shift the moment a candle closes, confirms it with a second rule, and shows the same reading for all your timeframes and symbols in two interactive dashboards.

What it does

1 Heikin Ashi trend candles

Four-colour candles tell you not only the direction but whether the move is **fresh** or **continuing**.

2 Two-stage signals

A circle marks the momentum shift; an arrow appears only when price confirms it. Choose which one alerts you.

3 Multi-timeframe dashboard

Trend and last signal on up to 16 timeframes of the current symbol, upper-left of the chart.

4 Market scanner

Your watchlist on the chart timeframe, lower-right, with NEW tags on fresh confirmed signals.

5 Click to open

Click any timeframe row or symbol row and the chart switches to it instantly.

6 EA ready

Nine buffers in a fixed order, signal prices anchored to exact HA highs and lows, safe to read with `iCustom`.

What it is not

It is not a trading robot and it does not open trades. It is a decision-support tool: it organises price action so you can see trend, momentum shift and confirmation faster. Entries, stops, position size and trade management remain your decisions.

KEY POINT

The indicator answers three questions at a glance: **which way** is the trend (candle colour), **has it just turned** (circle), and **has the turn been proven** (arrow). The dashboards answer the same three questions for every timeframe and symbol at once.

Why Heikin Ashi

Regular candles show every tick of indecision. Heikin Ashi averages each candle with the one before, so trends appear as long runs of one colour and pullbacks stand out as colour changes instead of blending into the noise. Figure 1.1 shows the same price data drawn both ways.



Figure 1.1 — The same price data as regular candles (left) and as Crystal HA Signals Heikin Ashi candles (right).

What is new in version 4

Area	Change	Why it matters
Dashboards	New MTF panel (upper left) and Market Scan panel (lower right)	See trend and last signal everywhere without switching charts
Interaction	Click a row to open that timeframe or symbol; hover highlight	Move from scan to chart in one click
Design	3D pills, gold frame, candle logo, DPI scaling	Readable on laptops and 4K monitors alike
Engine	Only the newest bars are recalculated on each tick	Much lighter CPU load on long histories
Signals	A new shift now replaces any older pending signal	Never a buy and a sell arrow on the same candle
Signals	Work with every candle style, not only Trend Colors	Freedom to pick the look you prefer
Alerts	No alert blackout after attaching; no alerts in the Strategy Tester	Alerts arrive from the first live signal; clean validation
Visuals	Arrow gap set in screen pixels; real candles fully hidden	Same clean spacing on every symbol and zoom level

NOTE

Settings from version 3 carry over. The nine buffers keep the same order, so existing EAs that read the indicator keep working.

Heikin Ashi explained

Heikin Ashi (Japanese for "average bar") builds each candle from averages instead of raw prices. The result is a smoother picture of the same market. Crystal HA Signals calculates Heikin Ashi from the real OHLC prices of your chart on every bar.

The formula

Value	Formula	Meaning
HA Close	$(\text{Open} + \text{High} + \text{Low} + \text{Close}) / 4$	Average price of the current bar
HA Open	$(\text{previous HA Open} + \text{previous HA Close}) / 2$	Midpoint of the previous HA body - this is what smooths the chart
HA High	$\max(\text{High}, \text{HA Open}, \text{HA Close})$	Top of the upper wick
HA Low	$\min(\text{Low}, \text{HA Open}, \text{HA Close})$	Bottom of the lower wick

How to read a Heikin Ashi chart

What you see	What it usually means
Long run of bullish candles with no lower wicks	Strong, one-sided buying pressure
Long run of bearish candles with no upper wicks	Strong, one-sided selling pressure
Bodies getting smaller, wicks on both sides	Momentum fading, possible pause or turn
First candle of the opposite colour	Momentum shift - the moment Crystal HA Signals draws a circle
Opposite-colour candles continuing	The shift is developing into a new swing

Strengths and honest limits

Strength	Limit to keep in mind
Filters small counter-moves, so trends are easy to hold	Colour changes arrive about one bar after a regular chart would show the turn
Makes pullbacks and exhaustion visible	HA Open and HA Close are calculated values, not prices you can trade at
Works on any symbol and timeframe	Gaps are smoothed away, so check the real chart around news and weekend opens
Pairs well with levels (support, resistance, supply and demand)	In tight sideways ranges colours alternate and signals become frequent

WARNING

Because HA Close is an average, the price printed in a Crystal HA Signals alert is the HA Close of the signal candle - a reference level, not the price you will be filled at. Always check the live bid/ask before entering.

The four candle colours

With the default **Trend Colors** style every candle is one of four states. The colour answers two questions at once: direction, and whether the candle starts a move or continues one.



Figure 2.1 — The four states of the Trend Colors candle style (default colours).

State	Default colour	Rule	How traders use it
BULL COLOR	Lime	Bullish HA candle after a bearish one	Watch for a buy circle and confirmation
TREND UP	Dodger Blue	Bullish HA candle after a bullish one	Hold longs; avoid fresh shorts
BEAR COLOR	Red	Bearish HA candle after a bullish one	Watch for a sell circle and confirmation
TREND DOWN	Orange	Bearish HA candle after a bearish one	Hold shorts; avoid fresh longs

KEY POINT

Lime and red candles are **turning points**; blue and orange are **continuation**. A long blue run interrupted by a single red candle and then blue again is a pullback, not a reversal.

Where things appear on the chart



Figure 2.2 — Default layout: HA candles with signals on the chart, MTF panel upper left, Market Scan lower right.

Installation and first run

Five-minute setup

- 1 **Install.** After purchase, open MetaTrader 5 → **Toolbox** → **Market** → **Purchased** and click **Install**. The indicator appears in **Navigator** → **Indicators** → **Market**.
- 2 **Open a chart** of the symbol you trade. Any timeframe works; M15 or H1 is a good first view.
- 3 **Drag Crystal HA Signals onto the chart.** No DLL imports or web requests are needed; the indicator runs entirely inside MetaTrader.
- 4 **Inputs tab.** Leave the defaults for the first run. Edit **Symbols** in the Symbol Panel group to match your watchlist.
- 5 **Click OK.** The chart switches to a black background, real candles are hidden, Heikin Ashi candles are drawn and both panels appear.
- 6 **Wait a few seconds** the first time. Panels show **LOADING** while MetaTrader downloads history for other timeframes and symbols.

What you should see

Element	Where	If it is missing
Heikin Ashi candles	Price chart	Check Candle Style is set and the chart is in candle mode
Circles and arrows	Above/below signal candles	Enable Signals must be ON; signals are drawn within Lookback Bars only
MTF panel	Upper left	Show MTF Panel must be ON; not shown in a non-visual backtest
Market Scan panel	Lower right	Show Symbol Panel must be ON; check the symbol names match your broker

Permissions for push and email alerts

Channel	Where to set it up in MetaTrader 5
Push to phone	Tools → Options → Notifications: enter your MetaQuotes ID from the MT5 mobile app (Settings → Messages) and enable push notifications
Email	Tools → Options → Email: SMTP server, login, password, From and To addresses. Use Test to verify
Popup and sound	Nothing to set up - they work as soon as the indicator is attached

Removing the indicator

Remove it from **Charts** → **Indicators List** or right-click → **Indicators List**. The original chart colours, grid setting and candle drawing order are restored automatically, and both panels are deleted.

NOTE

The chart theme is applied once when the indicator starts. If you change chart colours by hand afterwards and then remove the indicator, the colours that were active **before** attaching are restored.

Reading the signals

Every signal goes through up to three stages. The circle is the early warning; the arrow is the confirmation. Both are drawn only on **closed** candles.



Figure 4.1 — A buy signal: bearish run, shift circle, waiting candle, confirmation arrow.

Stage 1 — the momentum shift (circle)

When a Heikin Ashi candle closes in the opposite colour to the previous one, a circle is drawn:

- **Blue circle below the candle** — bearish to bullish shift. Reference level = the HA High of this candle.
- **Orange circle above the candle** — bullish to bearish shift. Reference level = the HA Low of this candle.

Stage 2 — waiting

The indicator now watches the next candles, up to the **Confirmation Candles** setting (default 3). While it waits, the dashboards show **WAIT** for that timeframe or symbol.

Stage 3 — confirmation (arrow)

- **Green up arrow** — a later candle's HA Close finishes **above** the buy reference level.
- **Red down arrow** — a later candle's HA Close finishes **below** the sell reference level.

KEY POINT

The circle tells you momentum has turned; the arrow tells you price has proven it by closing beyond the shift candle's extreme. Waiting for the arrow filters many of the one-candle fake turns that happen inside ranges.

When a signal is cancelled

A pending signal does not always become an arrow. It is dropped in three situations:

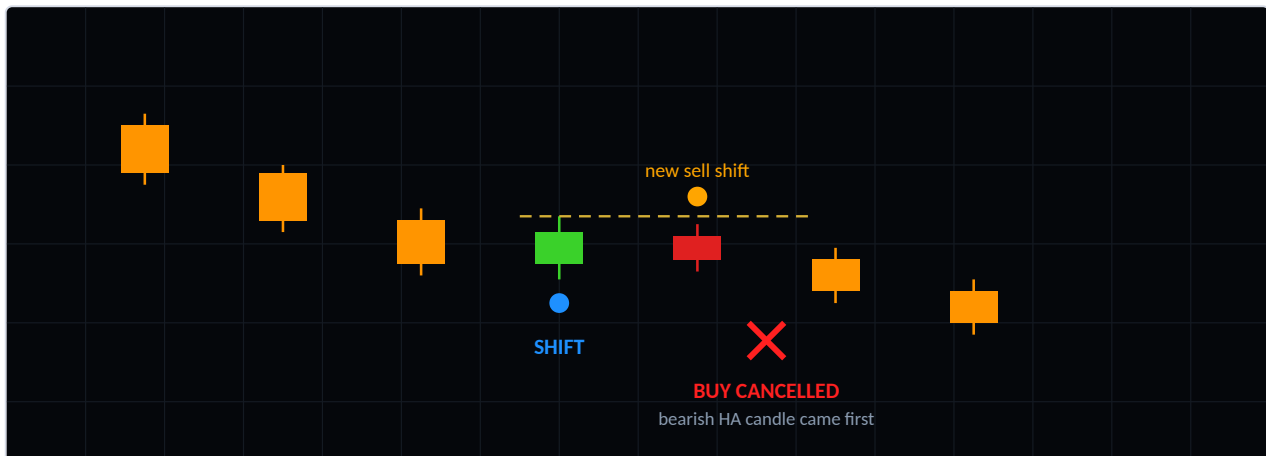


Figure 4.2 — A buy shift cancelled because a bearish HA candle closed before confirmation.

Situation	What happens	What you see
Opposite colour first	A buy shift is cancelled if a bearish HA candle closes before confirmation (and vice versa)	Circle stays, no arrow; usually a new opposite circle appears
Window expires	No confirming close within Confirmation Candles bars	Circle stays, no arrow; dashboard WAIT returns to NONE
New shift	Any new circle replaces every older pending signal	Only the newest shift can produce an arrow

NOTE

The last rule is new in version 4. Earlier versions could keep a buy and a sell signal pending at the same time, which occasionally put both arrows on one candle. That can no longer happen.

Signal reference card

Mark	Position	Meaning	Alert type that fires
● Blue circle	Below candle	Bullish momentum shift	AGGRESSIVE
● Orange circle	Above candle	Bearish momentum shift	AGGRESSIVE
▲ Green arrow	Below candle	Buy confirmed	CONFIRMED
▼ Red arrow	Above candle	Sell confirmed	CONFIRMED

How the engine works

Closed candles only

The forming candle (bar 0) is never used for signals. A circle or arrow is decided when its candle closes, so a mark you see on the chart does not disappear or move afterwards. This is the single most important property of the indicator: what you see in history is what you would have seen live.

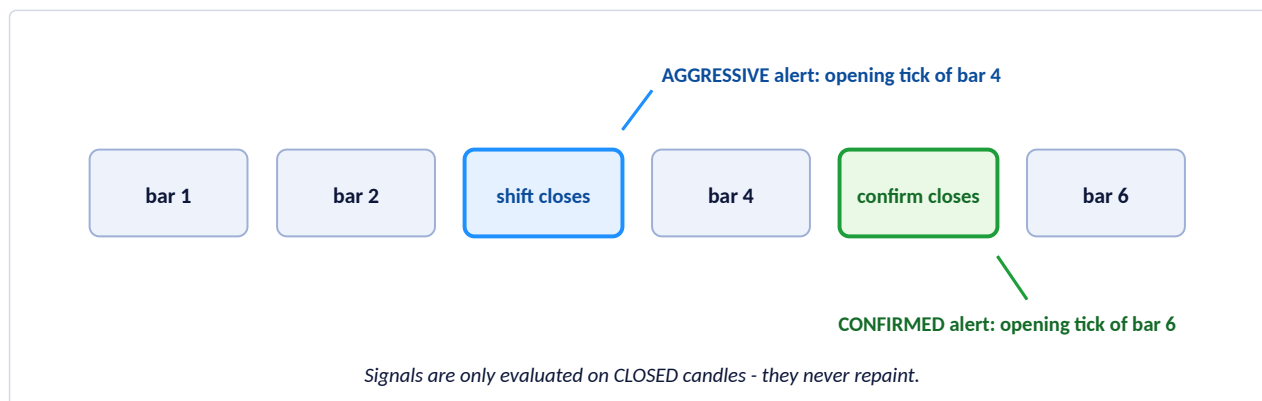


Figure 5.1 — When each alert type fires relative to the candles.

Alert timing

Alert type	Fires on	Message example
AGGRESSIVE	First tick after the shift candle closes	Crystal HA Signals XAUUSD M15 Bullish Momentum Shift
CONFIRMED	First tick after the confirming candle closes	Crystal HA Signals XAUUSD M15 BUY NOW! Entry: 4176.57

- One alert per signal candle. Refreshing the chart does not repeat old alerts.
- No alerts are sent while the indicator loads history, so attaching it never floods you with past signals.
- Only the alert type you select fires. Circles and arrows are always drawn either way.

WARNING

The **Entry** value in a CONFIRMED alert is the HA Close of the confirming candle. Heikin Ashi averages price, so this is a reference level and can differ from the current market price. Check bid/ask before placing an order.

The calculation cycle

Event	What is recalculated
Indicator attached / history reloaded	Heikin Ashi for Lookback Bars + 80 warm-up bars (or the full history if Optimize Performance is OFF); signals within Lookback Bars
Every new tick	Only the newest three bars - the forming candle and the two before it
Every second (timer)	The dashboards check whether any timeframe or symbol has printed a new bar; only those rows are recomputed

Universal arrow spacing

Many indicators place arrows a fixed number of points or a percentage of the candle away from price. That looks fine on one symbol and wrong on the next: the arrow sticks to a small candle on EURUSD and floats far away from a large candle on gold or bitcoin.

Crystal HA Signals stores each signal at the **exact** HA High or HA Low of its candle and moves the drawing by a fixed number of **screen pixels**. The gap therefore looks identical on every candle, symbol, timeframe and zoom level.



Figure 5.2 — The gap between candle and arrow is measured in pixels, not price.

Signal Size	Arrow width	Arrow gap	Circle gap
SMALL	2	10 px	7 px
MEDIUM (default)	3	14 px	10 px
LARGE	4	18 px	13 px

KEY POINT

Because the buffer holds the exact HA Low (buy) or HA High (sell), an EA reading the indicator gets a clean price level it can use directly, for example as a stop-loss anchor.

Why signals do not repaint

Common repaint cause	How Crystal HA Signals avoids it
Signals decided on the forming candle	The forming candle is skipped; signals are decided on close
Future bars used in the calculation	Only the current bar and the ones before it are used
Offsets based on the candle range	Offsets are pixel based; the stored price never changes
Overlapping buy and sell trackers	A new shift cancels older pending signals

NOTE

Heikin Ashi needs a starting point. When the chart history is reloaded, the first few dozen bars are used as warm-up and are not given signals, which is why signals only appear within Lookback Bars.

Settings: Main

Group ==== Crystal HA Signals Settings ==== controls how the chart looks.

Setting	Default	What it does
Chart Theme	BLACK_THEME	Background colour and how the real candles are hidden
Candle Style	TREND_COLORS	How Heikin Ashi candles are coloured
Bull Color	Lime	Bullish candles (STANDARD) or fresh bullish candles (TREND_COLORS)
Bear Color	Red	Bearish candles (STANDARD) or fresh bearish candles (TREND_COLORS)
Trend Up Color	Dodger Blue	Continuing bullish candles (TREND_COLORS only)
Trend Down Color	Orange	Continuing bearish candles (TREND_COLORS only)

Chart Theme

Value	Effect	When to use it
BLACK_THEME	Black background, white text. Real candles are painted black so only HA candles are visible	Default. Best contrast for the four candle colours and the dashboards
WHITE_THEME	White background, black text. Real candles are painted white	Bright rooms, printing screenshots, personal preference

In both themes the grid is hidden, chart shift is enabled so the latest candle is not glued to the price scale, and the price chart is placed behind indicators so HA candles always draw on top. Everything is restored when the indicator is removed.

NOTE

The dashboards keep their dark navy and gold design in both themes. They are designed to be read on any background.

Candle Style

Value	Colours used	Effect	When to use it
STANDARD	Bull Color, Bear Color	Two colours: bullish or bearish	Minimalist charts, classic Heikin Ashi look
TREND_COLORS	All four colour inputs	Separates fresh turns from continuation (see Figure 2.1)	Default. Recommended for reading signals
MOMENTUM_COLORS	Fixed: LimeGreen, Green, Red, DarkRed	Strong body (over 70% of the candle range) versus weak body	Judging candle strength inside a trend

KEY POINT

Signals work with every style. The dashboards always use the four-state Trend Colors logic, so they read the same whichever style you pick for the chart.

Colour inputs in detail

Setting	STANDARD	TREND_COLORS	MOMENTUM_COLORS
Bull Color	Every bullish candle	First bullish candle after a bearish one	Not used
Bear Color	Every bearish candle	First bearish candle after a bullish one	Not used
Trend Up Color	Not used	Bullish candle after a bullish one	Not used
Trend Down Color	Not used	Bearish candle after a bearish one	Not used

MOMENTUM_COLORS decoded

Candle	Colour	Rule
Strong bullish	LimeGreen	Bullish, body larger than 70% of the HA range
Weak bullish	Green	Bullish, body 70% of the range or less
Weak bearish	Red	Bearish, body 70% of the range or less
Strong bearish	DarkRed	Bearish, body larger than 70% of the range

KEY POINT

Keep the default colours if you use the dashboards. The pills in both panels use the same four colours as the candles, so a blue BULLISH pill on H4 means exactly what a blue candle means on your chart.

WARNING

Avoid picking a candle colour identical to the chart background. The candle will become invisible, and on BLACK_THEME the real candles are also painted black.

Colour ideas

Look	Bull	Bear	Trend Up	Trend Down
Crystal default	Lime	Red	Dodger Blue	Orange
Classic green/red	Lime	Red	Green	Crimson
Colour-blind friendly	Deep Sky Blue	Orange	Royal Blue	Dark Orange
Monochrome	White	Gray	Silver	Dim Gray

Settings: Signal detection

Group **==== Signal Detection Settings ====** controls when circles and arrows appear.

Setting	Default	What it does
Enable Signals	ON	Draw circles and arrows and send alerts
Lookback Bars	200	How many recent bars can carry signals
Confirmation Candles	3	How many candles after a shift can confirm it
Signal Size	MEDIUM	Arrow and circle size and their pixel gap

Enable Signals

Value	Effect	When to use it
ON	Circles, arrows and alerts are active	Normal use
OFF	Only Heikin Ashi candles and the dashboards	Clean chart for pure trend reading, or a second copy on the same chart

Lookback Bars

Value	Effect	When to use it
50-100	Only the latest signals are drawn; lightest load	Scalping on M1-M5, many charts open
200 (default)	Several days on intraday charts	Most traders
500-1000	Long signal history for study	Reviewing how signals behaved; swing trading on H4-D1

NOTE

With Optimize Performance ON, Heikin Ashi candles are also drawn only for Lookback Bars plus 80 warm-up bars. Turn Optimize Performance OFF if you want HA candles across the whole history.

Confirmation Candles

After a circle appears, this is the number of following candles allowed to close beyond the reference level and produce an arrow.

Value	Effect	When to use it
1	Only the very next candle can confirm; fewest arrows, fastest	Strong trending markets, momentum style
2	Balanced, slightly stricter than default	Fast intraday charts (M1-M5)
3 (default)	Allows a short pause before the breakout	Most symbols and timeframes
4-6	More arrows, including slower confirmations	H4-D1 swing trading, slower markets

KEY POINT

Raising this value produces more arrows, not better ones. If you see too many late arrows in ranges, lower it; if valid moves are missed because price paused first, raise it by one.

Signal Size

Value	Effect	When to use it
SMALL	Thin marks, 10 px arrow gap	Zoomed-out charts, many candles on screen, small laptop screens
MEDIUM (default)	Standard marks, 14 px gap	Most screens and zoom levels
LARGE	Bold marks, 18 px gap	4K monitors, zoomed-in charts, trading from a distance

NOTE

Arrow and circle positions are set in pixels, so changing Signal Size never moves a signal to a different price. It only changes how it is drawn.

How the settings work together

Goal	Enable Signals	Lookback Bars	Confirmation Candles	Signal Size
Quiet chart, trend only	OFF	-	-	-
Fast scalping	ON	100	2	SMALL
Balanced intraday	ON	200	3	MEDIUM
Swing study	ON	600	4	LARGE

Signals and candle style

Signal rules use only the Heikin Ashi open and close, so the result is identical whichever candle style you choose. Choosing MOMENTUM_COLORS changes only how the candles look, not where circles and arrows appear.

WARNING

Changing Lookback Bars or Confirmation Candles redraws the whole signal history with the new rule. Compare settings on the same chart, not from memory of an earlier session.

Settings: Notifications

Group **==== Notification Settings** **====** decides which event alerts you and how.

Setting	Default	What it does
Alert Type	CONFIRMED - Arrow Signals	Which signal triggers alerts
Popup Alert	ON	MetaTrader alert window
Sound Alert	ON	Plays alert.wav
Mobile Push Alert	OFF	Push notification to the MT5 mobile app
Email Alert	OFF	Email through the terminal's SMTP settings

Alert Type

Value	Alerts on	Pros	Cons
AGGRESSIVE - Circle Signals	Every momentum shift (circle)	Earliest possible notice; good for watching setups form	More alerts, including shifts that never confirm
CONFIRMED - Arrow Signals	Every confirmed arrow	Fewer, higher-quality alerts; entry reference included	Arrives one or more candles later

KEY POINT

A common workflow: CONFIRMED on the chart you trade, AGGRESSIVE on a higher timeframe chart as an early warning that the bigger trend may be turning.

Delivery channels

Channel	Requires	Good for
Popup	Nothing	Desk trading - the alert window also keeps a list of recent alerts
Sound	Terminal sound enabled	Hearing signals while working in other windows
Push	MetaQuotes ID in Tools → Options → Notifications	Trading away from the desk; best used with a VPS
Email	SMTP in Tools → Options → Email	A written record of every signal

Message format

```

Popup / email
Crystal HA Signals | EURUSD H1 | BUY NOW! Entry: 1.08452
Crystal HA Signals | XAUUSD M15 | Bearish Momentum Shift

Push (mobile)
Crystal HA Signals
[UP] BULLISH CONFIRMED - EURUSD H1
BUY NOW! Entry: 1.08452
14:15 | Price: 1.08461

```

WARNING

Alerts come only from the chart the indicator is attached to. The Market Scan panel shows signals on other symbols but does not send alerts for them. Attach the indicator to each chart you want alerts from.

Settings: MTF panel

Group ==== MTF Panel (Upper Left) ====.

The MTF panel shows the **current symbol** on every timeframe in your list.

Setting	Default	What it does
Show MTF Panel	ON	Show or hide the panel
Timeframes	M5,M15,M30,H1,H4,D1	Comma-separated list of timeframes, one row each

Timeframes

Valid codes:

M1 M2 M3 M4 M5 M6 M10 M12 M15 M20 M30 H1 H2 H3 H4
H6 H8 H12 D1 W1 MN1

- Separate with commas; spaces are ignored; lower or upper case both work.
- Up to 16 timeframes. Unknown codes are skipped.
- Rows appear in the order you type them.
- The row matching the chart timeframe is marked with a gold bar and cyan label.

Style	Suggested list
Scalping	M1,M5,M15,H1
Day trading	M5,M15,M30,H1,H4,D1
Swing	H1,H4,D1,W1
Top-down	M15,H1,H4,D1,W1,MN1



Figure 9.1 — MTF panel on XAUUSD.

KEY POINT

Click any timeframe row and the chart switches to that timeframe. The panel stays in place and remembers whether it was collapsed.

NOTE

The MTF panel reads closed candles on each timeframe, so a D1 row changes at most once a day. This keeps it accurate and extremely light.

Settings: Symbol panel

Group ==== **Symbol Panel (Lower Right)** ====.

The Market Scan panel shows your watchlist on the **chart timeframe**. Switch the chart from M15 to H1 and every row switches to H1 as well.

Setting	Default	What it does
Show Symbol Panel	ON	Show or hide the panel
Symbols	EURUSD,GBPUSD,USDJPY,XAUUSD,BTCUSD,US30	Comma-separated watchlist, one row each

Symbols and broker suffixes

Brokers often add a suffix or prefix, for example `EURUSD.m`, `EURUSD_raw` or `XAUUSD#`. For each name the indicator:

1. tries the name exactly as typed;
2. if that fails, adds the suffix of the current chart symbol (for example `.m` taken from `EURUSD.m`).

Names that still cannot be found are skipped, so a missing row means the symbol name did not match. Type the name exactly as it appears in Market Watch to be sure.

- Up to 16 symbols.
- Symbols are added to Market Watch automatically.
- The row matching the chart symbol is marked in gold and cyan.



Figure 10.1 — Market Scan panel on M15.

WARNING

Indices, metals and crypto often use different names at different brokers (US30, DJ30, WS30, DJI; XAUUSD, GOLD). The automatic suffix only helps when the base name matches. Check Market Watch if a row is missing.

KEY POINT

Click a symbol row to open that symbol on the chart at the same timeframe. Combined with the NEW tag, you can go from 'a fresh signal appeared somewhere' to looking at it in one click.

Settings: Appearance and advanced

Panel Appearance

Setting	Default	What it does
FRESH Tag Duration (bars)	3	How many bars a confirmed BUY/SELL keeps its NEW tag
Panel Margin (pixels)	12	Distance of both panels from the chart edges

FRESH Tag Duration

Value	Effect	When to use it
0	NEW tag never shown; the panel shows bar counts only	You prefer numbers
1-2	Only brand-new confirmations are tagged	Scalping, fast timeframes
3 (default)	Tag lasts three bars of that row's timeframe	Most traders
5-10	Tag stays longer	H4-D1 swing trading, checking the panel a few times a day

Panel Margin

The MTF panel sits this many pixels from the left and top edges (plus room for the chart's symbol caption). The Market Scan panel sits this many pixels from the right and bottom edges and stays in the corner when the chart is resized. Values are scaled for high-DPI screens automatically.

Advanced

Setting	Default	What it does
Optimize Performance	ON	Calculate only Lookback Bars + 80 bars of history
Show Original Candles	OFF	Show the real candles faintly behind the HA candles

Optimize Performance

Value	Effect	When to use it
ON	HA candles for recent history only; fastest loading	Default; many charts; VPS
OFF	HA candles for the whole history	Studying long history on a single chart

Show Original Candles

Value	Effect	When to use it
OFF	Real candles painted in the background colour - invisible	Clean Heikin Ashi chart (default)
ON	Real candles drawn in faint grey behind the HA candles	Comparing HA values with real highs, lows and gaps

KEY POINT

Show Original Candles ON is useful around news and at the weekly open, where Heikin Ashi smooths away gaps that the real candles still show.

The dashboards in depth

Both panels share one design. Each row answers three questions: which way is the trend, is there a signal, and how old is it.

Row anatomy

Column	Shows	Values
TF / SYMBOL	Row name	Gold bar and cyan text = the timeframe or symbol on your chart
TREND	Colour state of the last closed HA candle	BULLISH BULLISH BEARISH BEARISH
SIGNAL	Latest signal on that row	BUY SELL WAIT WAIT NONE
Tag	Age of the signal	NEW or "4 bars"

TREND pill colours

Pill	Meaning
BULLISH	Continuing bullish run (blue candle)
BULLISH	Just turned bullish (lime candle)
BEARISH	Just turned bearish (red candle)
BEARISH	Continuing bearish run (orange candle)

SIGNAL pill states

Pill	Meaning	Changes to
BUY	Last event was a confirmed buy arrow	A newer shift or arrow replaces it
SELL	Last event was a confirmed sell arrow	A newer shift or arrow replaces it
WAIT	Buy shift (circle) pending confirmation	BUY if confirmed, NONE if the window expires
WAIT	Sell shift (circle) pending confirmation	SELL if confirmed, NONE if the window expires
NONE	No active signal in the scanned window	WAIT when the next circle appears

Tags and counters

Element	Meaning
NEW	Confirmed BUY/SELL within FRESH Tag Duration bars
4 bars	Bars since the signal, counted on that row's timeframe (last closed bar = 1)
LOADING	History for that symbol or timeframe is still downloading; retried every second
Bias row	▲ BULLISH n / ▼ BEARISH n counts rows in each state; the larger side lights up

Controls

Action	Result
Click the – button	Collapse the panel to its header bar
Click the + button	Expand the panel again
Click a timeframe row (MTF)	Chart switches to that timeframe
Click a symbol row (Market Scan)	Chart opens that symbol at the current timeframe
Hover over a row	Row lights up with a gold edge to show it is clickable
Resize the chart	Market Scan stays anchored to the lower-right corner

NOTE

The collapsed or expanded state is remembered when you change timeframe or symbol. It is stored in terminal global variables, so it is shared by every chart running the indicator in that terminal.

Reading the panels together

The strongest readings come from agreement. Use the MTF panel to find direction, and the Market Scan to find which market is ready.

MTF panel shows	Reading	What to look for next
H4 and D1 BULLISH, M15 WAIT (buy)	Pullback ending inside an uptrend	A BUY on M15 - trend continuation
All rows BULLISH	Strong alignment	Stay with longs; entries on pullbacks only
H1 BEARISH, H4 and D1 BULLISH	Lower timeframe correction	Wait; do not short against H4 and D1
Mixed colours, several WAIT	Range or transition	Reduce size or wait for alignment
D1 turned red, H4 SELL NEW	Possible larger reversal	Treat longs with caution; watch for lower-timeframe SELL

KEY POINT

Scan the Market Scan panel for **NEW** tags, then click the row to open that chart and check its MTF panel. Two clicks take you from a watchlist to a full top-down read of a single market.

WARNING

The panels read the last closed candle of each timeframe. A long D1 candle still forming may look very different from yesterday's closed candle shown in the D1 row.

Trading playbooks

These are examples of how traders combine the signals, not rules that guarantee a result. Always apply your own risk management.

Playbook 1 — Trend continuation

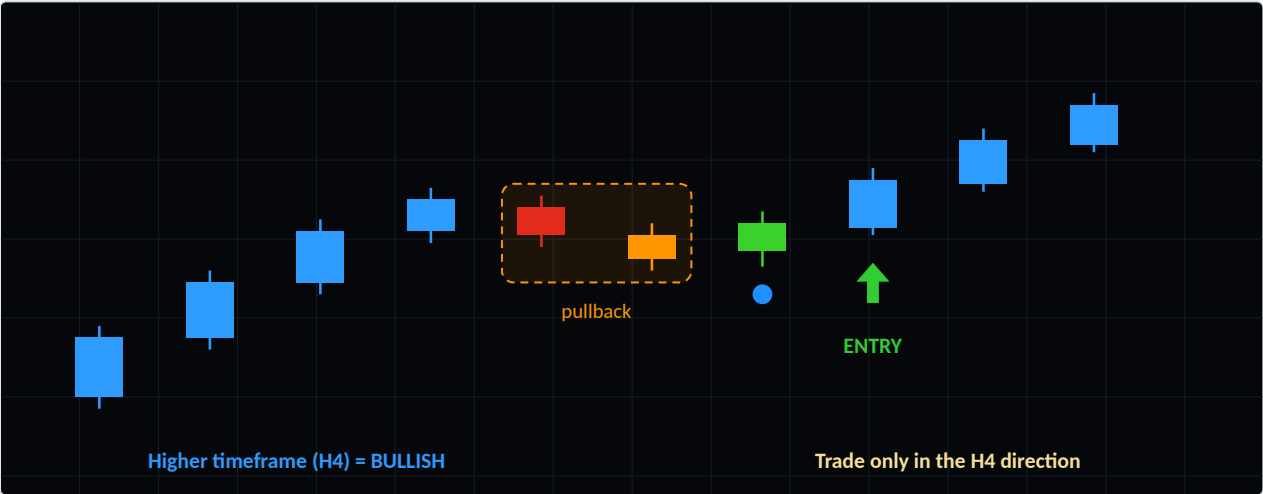


Figure 13.1 — A pullback in an uptrend ends with a shift and a confirmation.

Stage	What you are waiting for
1. Direction	H4 (or your higher timeframe) is BULLISH in the MTF panel
2. Pullback	Entry timeframe prints red/orange candles against the trend
3. Shift	Blue circle below a lime candle - the pullback is losing momentum
4. Confirmation	Green arrow: HA Close above the shift candle's HA High
5. Risk	Stop below the pullback low or the shift candle's HA Low (buffer 5 value)
6. Management	Hold while candles stay blue; consider exits on red candles or a sell arrow

KEY POINT

The mirror image works for downtrends: H4 BEARISH, pullback in blue/lime, orange circle above a red candle, red arrow to confirm.

Playbook 2 — Reversal at a level

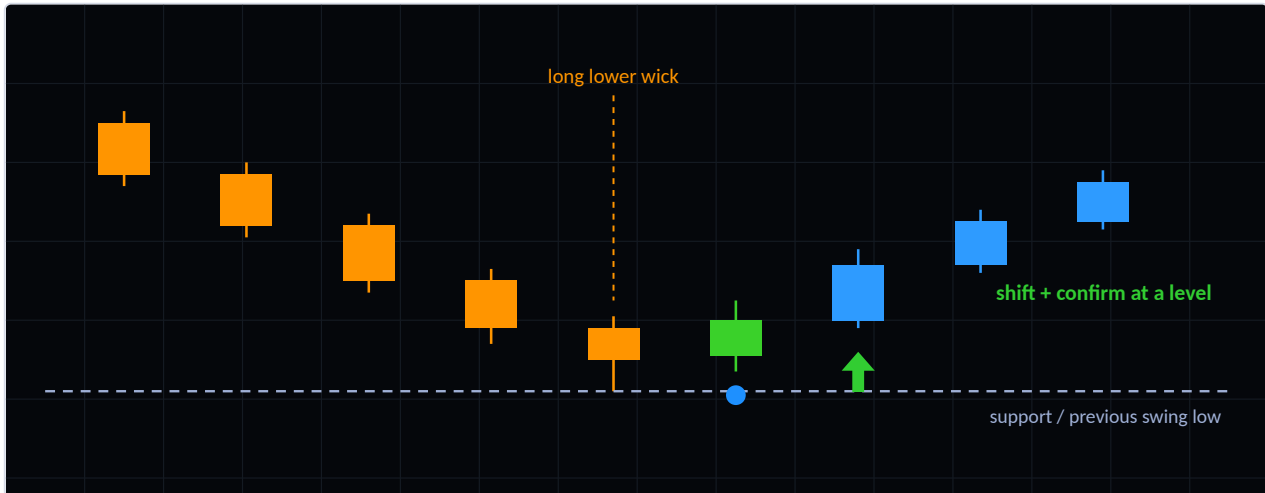


Figure 13.2 — A bearish run exhausts at support, then shifts and confirms.

Stage	What you are waiting for
1. Level	Price reaches a level you already marked: support, resistance, supply/demand zone, previous swing
2. Exhaustion	Smaller bodies and a long wick against the move
3. Shift at the level	Circle forms at or near the level
4. Confirmation	Arrow within Confirmation Candles bars
5. Filter	Higher timeframe not strongly against you, or turning (lime/red row)

Playbook 3 — Multi-timeframe alignment

Trading timeframe	Direction from	Trigger from	Avoid when
M1-M5	M15 and H1	Arrow on M1/M5	H1 is WAIT against your trade
M15	H1 and H4	Arrow on M15	H4 is the opposite colour
H1	H4 and D1	Arrow on H1	D1 just turned against you
H4	D1 and W1	Arrow on H4	W1 is the opposite colour

NOTE

Alignment is a filter, not a trigger. It reduces the number of trades by skipping signals against the bigger picture.

WARNING

No signal method works in every market condition. Heikin Ashi is strongest in trending markets and produces more shifts in tight ranges. Use stops on every trade and never risk more than you can afford to lose.

Recommended presets

Starting points. Change one setting at a time and watch the effect for a few sessions.

Scalper (M1-M5)

Setting	Value	Reason
Lookback Bars	100	Only recent signals matter; lightest load
Confirmation Candles	2	Fast markets; late confirmations are less useful
Alert Type	CONFIRMED	Avoid alert overload from every shift
Signal Size	SMALL	Many candles on screen
Timeframes	M1,M5,M15,H1	Short-term context up to H1
FRESH Tag Duration	2	Only the newest confirmations

Day trader (M15-H1)

Setting	Value	Reason
Lookback Bars	200	Several sessions of history
Confirmation Candles	3	Allows a short pause before the breakout
Alert Type	CONFIRMED	Quality over quantity
Timeframes	M5,M15,M30,H1,H4,D1	Full intraday picture
FRESH Tag Duration	3	Default

Swing trader (H4-D1)

Setting	Value	Reason
Lookback Bars	500	Weeks of signal history
Confirmation Candles	4	Slower markets need more time
Alert Type	CONFIRMED + Push ON	Get notified away from the screen
Signal Size	LARGE	Zoomed-out charts
Timeframes	H1,H4,D1,W1	Higher-timeframe structure
FRESH Tag Duration	5	You check the panel less often

Gold, indices and crypto

Setting	Value	Reason
Confirmation Candles	2-3	Volatile markets confirm or fail quickly
Show Original Candles	ON (optional)	See real gaps and spikes behind the HA candles
Symbols	XAUUSD,XAGUSD,US30,NAS100,BTCUSD,ETHUSD	Use your broker's exact names

EA integration

Crystal HA Signals can drive an Expert Advisor. The nine buffers keep a fixed order in every version, and signal buffers carry a clean price level.

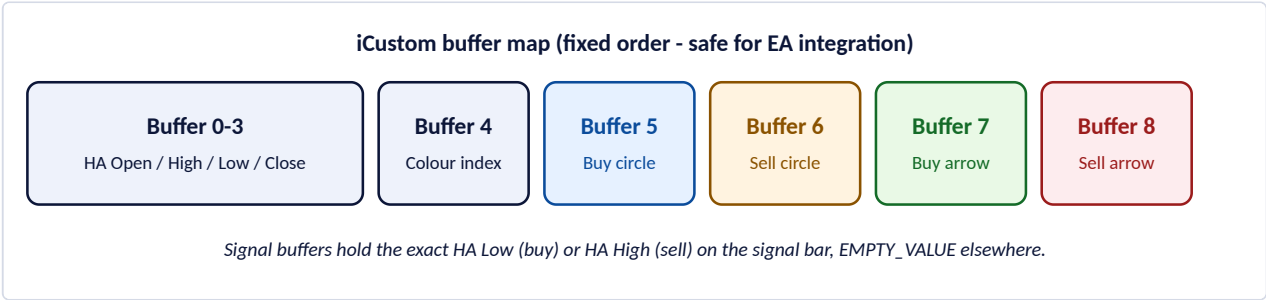


Figure 15.1 — Buffer map.

Buffer	Content	Value
0	HA Open	Heikin Ashi open of each bar
1	HA High	Heikin Ashi high
2	HA Low	Heikin Ashi low
3	HA Close	Heikin Ashi close
4	Colour index	STANDARD: 0 bull, 1 bear. TREND_COLORS: 0 fresh bull, 1 fresh bear, 2 trend up, 3 trend down
5	Buy circle	HA Low of the shift bar, otherwise EMPTY_VALUE
6	Sell circle	HA High of the shift bar, otherwise EMPTY_VALUE
7	Buy arrow	HA Low of the confirmation bar, otherwise EMPTY_VALUE
8	Sell arrow	HA High of the confirmation bar, otherwise EMPTY_VALUE

Buffer numbers inside the settings

You do not need this guide open to find a buffer. The last input group, **==== EA Buffer Info (read only - for iCustom) ====**, lists every buffer number in the indicator's settings window. These fields are for information only: editing them changes nothing.

Input	Shows
Buffers 0-3	0-3 = HA Open / High / Low / Close
Buffer 4	4 = Candle Color Index
Buffer 5 / 6	5 = BUY Circle (HA Low) / 6 = SELL Circle (HA High)
Buffer 7 / 8	7 = BUY Arrow (HA Low) / 8 = SELL Arrow (HA High)
Reading Tip	No signal = EMPTY_VALUE, read shift 1

Reading a confirmed signal

```
// Handle created once in OnInit() - defaults used, no parameters passed
int haHandle = iCustom(_Symbol, _Period, "Market\\Crystal HA Signals");

// On a new bar: read the last CLOSED bar (shift 1)
double buyArr[1], sellArr[1];
if(CopyBuffer(haHandle, 7, 1, 1, buyArr) == 1 && buyArr[0] != EMPTY_VALUE)
{
    // confirmed BUY - buyArr[0] = HA Low of the signal bar (stop-loss anchor)
}
if(CopyBuffer(haHandle, 8, 1, 1, sellArr) == 1 && sellArr[0] != EMPTY_VALUE)
{
    // confirmed SELL - sellArr[0] = HA High of the signal bar
}
}
```

KEY POINT

Always read shift 1. Bar 0 (the forming candle) never carries a signal, so reading shift 0 will always return EMPTY_VALUE.

NOTE

The path in iCustom must match where the indicator lives. Market purchases are under `Market\`; a copy in your own Indicators folder is referenced by its file name. If you pass inputs through iCustom, pass them in the exact order and type of the input list.

Performance

Version 4 was rebuilt to stay light even with both dashboards and many charts open.

Component	Runs when	Cost
Heikin Ashi + signals (full)	Attach, history reload, timeframe change	Lookback Bars + 80 bars, once
Heikin Ashi + signals (update)	Every tick	3 bars
Dashboard check	Once per second	Reads the last bar time of each row
Dashboard row recompute	Only when that timeframe/symbol prints a new bar	90 bars of one row
Dashboard repaint	Only when something visible changed	One bitmap per panel
Hover highlight	Only when the mouse moves to a different row	One repaint

Why it stays light

- **Incremental calculation.** Earlier versions recalculated the entire history on every tick. Version 4 recalculates three bars.
- **Bar-time cache.** A D1 row is recomputed once a day; an M5 row once every five minutes.
- **Change detection.** If no pill, tag or counter changed, the panel is not redrawn.
- **Tester aware.** In a non-visual backtest no panels are built and no alerts are attempted.

If your terminal feels slow

Try	Effect
Keep Optimize Performance ON	Limits history calculation
Lower Lookback Bars	Fewer bars to draw and check
Shorten the Symbols list	Fewer symbols to download and scan
Remove M1 from Timeframes	M1 prints a new bar every minute
Hide the panels on secondary charts	Show MTF Panel / Show Symbol Panel OFF

NOTE

The first time a panel loads a symbol or timeframe, MetaTrader may need a few seconds to download history. This is a one-time cost per symbol and timeframe; rows show LOADING until the data arrives.

Troubleshooting

Symptom	Likely cause	Fix
Real candles visible behind HA candles	Chart colours changed by hand or by a template after attaching	Remove and re-attach the indicator, or set Show Original Candles OFF
No circles or arrows	Enable Signals OFF, or signals are older than Lookback Bars	Turn Enable Signals ON; raise Lookback Bars
Circles but never arrows	Confirmation Candles too low for this market	Raise Confirmation Candles by 1
Too many arrows in ranges	Sideways market; confirmation window wide	Lower Confirmation Candles; use MTF alignment as a filter
No alerts	Alert Type set to the other signal type, or all channels OFF	Check Alert Type and at least one channel is ON
No push notifications	MetaQuotes ID missing or push disabled	Tools → Options → Notifications; send a test
No emails	SMTP not configured	Tools → Options → Email; use Test
No alerts in the Strategy Tester	By design - the tester cannot deliver alerts	Test alerts on a live or demo chart
A symbol row is missing	Name not found at your broker	Type the exact Market Watch name, including suffix
Row stuck on LOADING	History not available for that symbol/timeframe	Open that symbol and timeframe once; check the broker offers it
Panel overlaps other objects	Another indicator uses the same corner	Change Panel Margin or hide one panel
Panel clicks do nothing	Clicking the row of the current timeframe/symbol	That row is already open; click a different row
Panels missing in the tester	Non-visual mode	Use visual mode to see panels in the Strategy Tester
Alert price differs from market	Entry shown is the HA Close	Use the live bid/ask for orders (see Chapter 5)
Arrows look too small/large	Screen size or zoom level	Change Signal Size

KEY POINT

When reporting a problem, include the symbol, timeframe, your input values and a screenshot of the chart with the Experts and Journal tabs visible. It shortens the fix considerably.

FAQ

Does Crystal HA Signals repaint?

No. Circles and arrows are decided when their candle closes and are never moved or removed afterwards. The forming candle is not used for signals.

Why does the arrow appear one or more candles after the circle?

The arrow needs a later candle to close beyond the shift candle's extreme. That extra step is what makes it a confirmation.

Which alert type should I use?

CONFIRMED for trading decisions; AGGRESSIVE when you want an early heads-up. Many traders run CONFIRMED on the trading chart and AGGRESSIVE on a higher timeframe.

Why is the alert entry price different from the market?

It is the HA Close of the signal candle, an average price. Use it as a reference and trade at the live price.

Can I get alerts for every symbol in the Market Scan?

Alerts come from the chart the indicator is attached to. Attach it to one chart per symbol you want alerts from.

Why did a circle not turn into an arrow?

The shift was cancelled by an opposite-colour candle, replaced by a newer shift, or not confirmed within Confirmation Candles bars.

Can a buy and a sell arrow appear on the same candle?

No. From version 4 a new shift cancels every older pending signal.

Does it work on gold, indices and crypto?

Yes. Pixel-based spacing keeps signals tidy on any price scale. Enter your broker's exact symbol names in the Symbols list.

Does it work on any timeframe?

Yes, from M1 to MN1. The MTF panel accepts any standard timeframe code.

Why are there no HA candles far back in history?

Optimize Performance limits calculation to Lookback Bars + 80. Turn it OFF for full history.

Why do the panels show LOADING?

MetaTrader is downloading history for that symbol or timeframe. It clears automatically.

Why does the D1 row not change during the day?

Rows read the last closed candle. The D1 row updates when the daily candle closes.

Can I move the panels?

Their corners are fixed (MTF upper left, Market Scan lower right). Use Panel Margin to change the distance from the edges, or hide a panel.

Can I use it with a white chart?

Yes. Choose WHITE_THEME. The dashboards keep their dark design.

Will my own chart colours come back?

Yes. Removing the indicator restores the colours, grid and drawing order that were active before attaching.

Does it work in the Strategy Tester?

Signals and candles do. Panels appear in visual mode only, and alerts are never sent in the tester.

Can an EA read the signals?

Yes. See Chapter 15 for the buffer map and an iCustom example. Read shift 1.

Does the candle style change the signals?

No. Signals depend only on HA open and close. Style changes only the colours.

How many symbols and timeframes can the panels hold?

Up to 16 each.

Is it a trading robot?

No. It is an indicator that supports your decisions. It does not place trades.

Does collapsing a panel affect other charts?

The collapsed state is shared by all charts running the indicator in the same terminal.

How do I get support?

Message the author on MQL5 or post in the product comments. Include symbol, timeframe, settings and a screenshot.

KEY POINT

Most questions come down to two facts: signals are decided on closed candles, and the panels read closed candles on each timeframe. Keep these in mind and the indicator behaves exactly as expected.

Glossary, version history and support

Glossary

Term	Meaning
Heikin Ashi (HA)	Candles built from averaged prices to smooth the chart
Momentum shift	An HA candle closing in the opposite colour to the previous one; marked with a circle
Reference level	HA High (buy) or HA Low (sell) of the shift candle; price must close beyond it to confirm
Confirmation	An HA Close beyond the reference level within the confirmation window; marked with an arrow
Confirmation window	The Confirmation Candles setting: candles allowed to confirm a shift
Fresh / turning candle	Blue or red candle: the first candle of a new colour
Continuation candle	Blue or orange candle: same colour as the previous candle
Closed candle	A candle whose time period has ended; its values are final
Repaint	When an indicator changes or removes a past signal. Crystal HA Signals does not
MTF	Multi-timeframe
Bias row	Counters at the top of each panel showing how many rows are bullish and bearish
Buffer	Data array an EA can read with iCustom

Version history

Version	Changes
4.40	EA Buffer Info group: buffer numbers shown directly in the input settings
4.04	No alerts inside the Strategy Tester; push text uses plain characters
4.02-4.03	Clickable rows, hover highlight, gold frame, brighter labels, candle logo
4.01	3D dashboard design; real candles fully hidden; DPI scaling
4.00	MTF and Market Scan dashboards; incremental engine; single pending signal; signals in every candle style
3.91	Pixel-based arrow spacing; new alert format and names

Support

Send a private message to **jawadtrader22** on MQL5 or post in the product comments at mql5.com/en/users/jawadtrader22. Please include symbol, timeframe, your settings and a screenshot.

Recommended setup

For push alerts around the clock, run MetaTrader 5 on a VPS: my.hyonix.com/aff.php?aff=6417. Broker used for testing: vigco.co/la-com-inv/3j5LdsKA.

RISK DISCLAIMER

Trading foreign exchange, metals, indices and cryptocurrencies on margin carries a high level of risk and may not be suitable for all investors. Past performance is not indicative of future results. Crystal HA Signals is an analysis tool; it does not guarantee profits and does not place trades. Use proper risk management and trade only with money you can afford to lose.