

# How the Indicator Works — Methodology & Tear-Sheet Overview

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## Executive Summary

The XRP Top/Bottom Detector by Azro Systems highlights statistically significant cycle extremes by combining multiple specialized signal layers. A MAJOR TOP/BOTTOM marker appears on XRP charts only when all layers converge and a cool-down period has elapsed, ensuring each print reflects repeatable market behavior rather than noise. The engine also projects these signals onto non-XRP charts, printing EARLY WARNING and MAJOR WARNING labels when risk gates are breached.

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## Layer Overview

The detector blends long-horizon timing signals, market-context alignment metrics, and momentum/saturation gauges. Exact inputs and weighting logic remain proprietary.

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## Calculation Highlights

- Each analytical layer produces a normalized signal value.
  - Signals are blended through a proprietary multi-layer logic tree into a single composite confidence level.
  - A label prints only when the composite exceeds a proprietary threshold and the timing window aligns with a statistically defined peak or trough zone.
  - EARLY WARNING and MAJOR WARNING labels extend the top-side logic to all major non-XRP pairs.
  - The detector refreshes its market data weekly and is fully recalibrated at each major cycle.
  - Exact formulas, inputs, and weighting logic remain confidential.
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## Known Limitations

Optimized for XRP; other assets may need separate tuning.

Cycle-oriented: intraday traders may experience signal lag.

However, back-tests assume ideal liquidity; live fills can differ.

The model is calibrated on XRP data, refreshes its market data weekly, and is fully recalibrated at each major cycle. Other assets have not yet completed the same validation schedule and may behave differently.

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## Validation & Robustness

Pre-release validation included a bar-accurate replay of the full XRP price history (2015-2025) and a matching TradingView strategy test. Both MAJOR bottom labels historically preceded upward moves and top labels were followed by declines. Additional scenario testing is planned, but no single test guarantees future performance.

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## Risk Disclaimer

Azro Systems products are decision-support tools only and must be combined with your own analysis and risk-management practices. Trading cryptocurrencies involves substantial risk and may not be suitable for all investors. Past performance is not indicative of future results. Always conduct your own due diligence. See Risk Disclosure for important limitations and risk-management requirements.

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Back-test version : v1.0.5 — Weekly Early-Buy ↔ MAJOR-Sell logic (signal math unchanged; non-XRP charts now show EARLY WARNING / MAJOR WARNING labels).

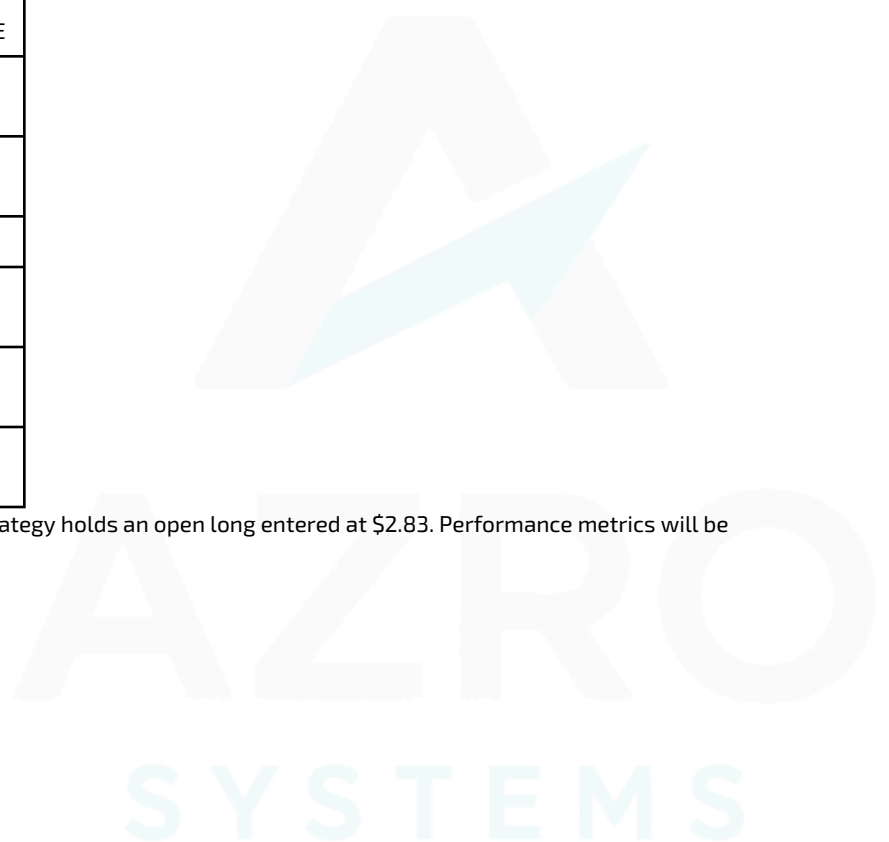
Time window : 01/01/2015 – 07/12/2025 (BITSTAMP XRP/USD)

### Performance Summary

Metric	Value	Notes
Total Return	+420,540 %	Includes open position gains
Net P&L	\$4 205 404	TradingView Total P&L
CAGR (geometric)	≈ 120.9 % p.a.	Assumes default start balance; includes open gains
Sharpe Ratio (weekly)	0.104	Risk-free rate = 0
Sharpe Ratio (annualized)	≈ 0.75	Derived from weekly value × $\sqrt{52}$
Sortino Ratio (weekly)	2 727.6	
Profit Factor	250.5	Gross profit ÷ gross loss
Max Entry Drawdown	-16.7 %	Worst intra-trade MAE
Max Equity Drawdown	-16.8 %	Portfolio peak-to-trough
Total Trades (closed)	2	
Win Rate	100 %	
Average Holding Period	53 weekly bars	
Commission (per side)	0.40 %	Coinbase spot assumption
Slippage	5 ticks	TradingView cost simulation

Open Position Note — As of 07/07/2025, the strategy holds an open long entered at \$2.83. Performance metrics will be refreshed once this trade closes.

### How to Read These Metrics



- Sharpe ratio (0.10 weekly,  $\approx$  0.75 annual) looks low because  $\sim$ 90 % of weekly bars are flat "wait" periods; volatility is overstated relative to realized gains.
- Sortino ratio ( $> 2\,700$ ) denominator is near zero because the back-test shows virtually no negative weekly returns so the ratio inflates.
- Profit factor ( $> 250\times$ ) is extremely high because the back-test recorded no losing trades; TradingView divides gross profit by zero, so it returns a very large placeholder value. Treat the figure as impressive but sample-sensitive—review CAGR and drawdown for a fuller picture of risk.
- Investors should place greater emphasis on CAGR, max drawdown, and forward out-of-sample tracking when evaluating persistence.

## Methodology & Disclosures

- Data source: BITSTAMP XRP/USD weekly closes pulled via TradingView.
- All Pine `request.security()` calls use `lookahead = barmerge.lookahead\_off`; the back-test does not access future data.
- Commission: 0.40 % per side; Slippage: 5 ticks.
- Strategy trades no leverage; the account was never margin-called.
- Hypothetical back-test; no guarantee of future results. Educational use only; not investment advice.
- Strategy code is proprietary and distributed as an invite-only TradingView script. Independent audit and code escrow available upon request.
- Published by Azro Labs LLC (UT Entity #14569235-0160) under publisher exclusion & CFTC Rule 4.14(a)(9).

## v1.0.5 Delta Note

This build adds cross-pair support and EARLY WARNING / MAJOR WARNING labels on non-XRP charts. Signal recipe and historical performance are unchanged versus v1.0.4.

## Trade Log (unchanged from v1.0.4)

#	Entry Date	Entry Px	Exit Date	Exit Px	P&L	Run-Up	Drawdown
1	03/13/2017	\$0.00629	01/08/2018	\$2.75794	+431 910 (43 397 %)	\$521 755	-\$87 (-8.79 %)
2	03/23/2020	\$0.14753	05/17/2021	\$1.45013	+3 783 043 (875 %)	\$5 308 334	-\$9 106 (-2.11 %)
3	06/13/2022	\$0.34335	OPEN	\$2.83714	+30 393 820 (719 %)	\$37 428 050	-\$706 639 (-16.73 %)

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For further questions, contact [support@azrosystems.com](mailto:support@azrosystems.com)

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Note: Throughout this document, "Detector" may appear in marketing copy, but the official TradingView listing is titled "Indicator"—both refer to the same XRP Top/Bottom model.

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