

User Manual for Delta AnalyzerDelta Analyzer® offers advanced tools for analyzing delta, volume, and order flow on the S&P 500 cash index (SPX cash index), allowing traders to see more, act faster, and maximize profits. Use this guide to learn various ways to utilize the Delta dashboard, strike table, session summaries, and other features available in Delta Analyzer®.Table of Contents

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## Preface

Welcome to Delta Analyzer® – a specialized tool created for traders who want to gain a deeper understanding of the dynamics of the S&P 500 cash index (SPX cash index) through analysis of delta, volume, bid/ask, and key price levels. This guide will help you master the interface and strategies to make more informed trading decisions. Delta Analyzer® is not an automated system but a powerful visual aid that combines SPX cash index transaction data in an intuitive way. Why Delta Analyzer®? Traditional charts show only price, but our tool breaks down data into price levels (strikes), showing interactions between buyers and sellers exclusively on S&P 500 cash. It's like looking "under the hood" of the SPX market – in real time.

## Part I

### User Reviews

“As a SPX day trader, Delta Analyzer changed my way of looking at delta. The color markings for POC and HVN help me avoid false signals – finally, I can see where

volume really accumulates on the cash index!” – Anna K., Poland

“For years, I’ve used simple tools, but Delta Analyzer gives me context for every transaction on SPX cash. Export to CSV is gold for offline analysis. I recommend it to every scalper.” – Michał S., Warsaw

“This tool saved me from several trades on S&P 500. Seeing delta changes in minute intervals, I can confirm trends before entering. Simple, but powerful!” – Piotr B., Kraków

“Delta Analyzer is a revolution for SPX cash analysis. Colors quickly show buying/selling pressure – I can’t imagine trading without it.” – Ewa M., Gdańsk

“I was looking for something to monitor volume on SPX cash – Delta Analyzer fits perfectly. Session summaries give a quick overview, and the strike table is masterful.” – Tomasz L., London

## **Part II Overview of the Strategic Guide**

This guide provides practical ideas for using Delta Analyzer® in daily S&P 500 cash trading. It doesn’t cover all possible applications but offers a solid foundation for implementing your own strategies with examples from real SPX cash index behavior. The basic assumption of Delta Analyzer® is to provide context for market activity exclusively on the S&P 500 cash index. It’s not a buy-sell system but a way to filter good trades from bad through visualization of delta and volume.

The “Anatomy of the Delta Dashboard” chapter will explain the interface structure. “Delta Analyzer Strategies” will discuss examples, formations, and configurations dedicated to SPX cash. All examples refer directly to this instrument. If you’re a new user, the dashboard may seem complicated, but treat it like an advanced SPX chart. Let the colors and numbers communicate trends – it will quickly become indispensable. Delta Analyzer® is a decision-support tool that combines technology with S&P 500 cash transaction data. Interpretation requires practice, but the guide will help you start. We encourage experimentation and adaptation to your SPX trading style. Why is it worth it? Delta Analyzer® shows data in a multidimensional way: delta, volume, bid/ask, and markings like POC – all exclusively for SPX cash. This is an advantage over traditional charts, especially on this key index.

## **Part III Anatomy of the Delta Dashboard**

The Delta Analyzer® dashboard divides transaction data for S&P 500 cash into price levels (strikes) and metrics such as delta, volume, and bid/ask. Colors indicate pressure (green – buying, red – selling). The main elements are the header, summaries, and main table. The goal is to analyze the interaction of price with volume within the session. View types: Delta Acc, Delta Sum, Per Strike, with markings HVN (High Volume Node), POC (Point of Control), VAH/VAL (Value Area High/Low).

Time intervals: Data aggregated every minute, last hour, entire day – helps track dynamics.

Color shading: Green for positive delta (buying), red for negative (selling), yellow for POC.

pobierz plik csv pobierz transakcje w csv Latest price: 6 647,00 (18.09.2025 19:04) before session prev next after session (17:23:00 - 18:19:00) Daily results: 0 strikes profit in 1 transactions. Success ratio 0 / 1. Max loss: 0.																																																	
18/17:00										18/18:00										18/19:00										last 60m					today														
Delta Acc		-968										-589										-622										271					-494												
Delta		12										379										-39										271					-628												
Sum			49	11	4132	2050	2062				56	378	2848	1228	1607				52	-32	235	124	91				54	271	2712	1204	1475			49	-623	40587	20242	19619											
Per strike			0,6		206,6						18,9		142,5						-5,5		39,8						12,9		129,2						-10,7		699,8												
Strike			delta	delta	vol	bid	ask	ACC		delta	delta	vol	bid	ask	ACC		delta	delta	vol	bid	ask	ACC		delta	delta	vol	bid	ask	ctx	delta	delta	vol	bid	ask															
6649											50	-14	116	59	44				65	15	51	18	38				46	0	168	77	78			57	-164	1011	581	416											
6648		LVN	100	-19	19	19	0	HVN	HVN	60	49	239	95	144	HVN	VAH	62	-12	51	32	19	HVN	HVN	56	36	291	127	164	HVN	53	-112	1380	739	627															
6647		LVN	77	-47	85	66	19	VAH	HVN	61	56	239	91	148	HVN	POC	45	-12	70	32	19	HVN	POC	53	43	310	123	167	HVN	49	-13	1316	655	641															
6646		VAH	74	-90	185	138	47	VAH	HVN	54	17	184	83	184	HVN	VAL	58	5	33	14	19	HVN	HVN	55	22	218	97	120	HVN	54	-130	1254	682	552															
6645		HVN	65	-100	326	213	113	HVN		74	49	99	24	74	VAH	HVN																																	
6644			47	-2	283	133	131	HVN	VAH	80	43	71	13	57	HVN																																		
6643			61	-68	306	187	119	HVN		64	-43	144	93	50	HVN																																		
6642			60	54	267	106	161			59	37	187	75	112																																			
6641		POC	HVN	57	-58	396	227	169			54	12	135	61	73																																		
6640			53	-18	273	145	127			55	-17	168	92	75																																			
6639		HVN	57	51	330	139	190			53	11	180	84	95																																			
6638		HVN	64	92	319	113	205		POC	HVN	68	90	241	75	166																																		
6637		VAL	HVN	62	79	322	121	201			55	-16	140	78	62																																		
6636			69	119	299	89	209			64	43	150	53	96																																			
6635			58	-36	210	123	86			57	-25	176	101	75																																			
6634			51	3	171	83	87			55	-18	162	90	72																																			
6633		LVN	57	-12	79	45	33			67	48	123	39	83																																			
6632			53	-7	103	55	48		VAL	LVN	100	53	53	0	83																																		
6631		LVN	54	7	83	38	45	HVN	LVN	100	19	19	0	19	HVN																																		
6630		LVN	100	41	41	0	41	POC	HVN						POC	HVN																																	
6629		LVN	100	24	24	0	24	HVN							HVN																																		
6628								HVN							HVN																																		

[illegible]

## 1 Header and Session Summaries

- Delta Acc: Cumulative session delta – measures net pressure.
- Delta Sum: Sum of delta changes in intervals.
- Per Strike: Average delta per price level.

## 2 Main Strike Table

- Columns: Delta%, Delta Vol, Bid, Ask, ACC (markings like HVN).

- Data: Numbers show changes, colors – direction.

Strategy: Look for clusters of green/red for trend confirmation.

### 3 Color Markings (HVN, POC, VAH/VAL)

- HVN: High volume – green, indicates high interest.
- POC: Control point – yellow/red, most traded level.
- VAH/VAL: Value area boundaries – yellow.

Strategy: Use as support/resistance – test price reaction.

### 4 Delta and Volume – Understanding Key Metrics

Delta measures the difference between bid/ask transactions.

Volume shows activity. Strategy: Positive delta = aggressive buying; monitor in real time.

### 5 Time Intervals and Data Aggregation

Column blocks for minutes, hours, day – aggregation helps analyze trends. Strategy: Compare intervals for confirmation of rotation or breakout.

### What is a Footprint?

Let's start by explaining what a Footprint chart (also known as Footprint Chart, Order Flow Chart, or Cluster Chart) is. It is an advanced type of chart used in financial market analysis, especially in day trading and scalping on instruments like futures, indices, or cryptocurrencies. Unlike classic candlestick charts, which show only OHLC (Open, High, Low, Close) and possibly total volume, the Footprint chart "breaks down" each candle into individual price levels and displays detailed transaction data on each of them.

Key features of the Footprint chart:

- Volume at price level — Shows exactly how many contracts/shares/turnover were executed at each price tick inside the candle.
- Bid x Ask — Most popular type: left side for bid transactions (aggressive selling), right for ask (aggressive buying).
- Delta — Difference between buying and selling volume (positive delta = buyer pressure, negative = seller).
- Coloring — Often green/red for delta, highlights for imbalance (buy/sell imbalances).
- Additional elements — POC (Point of Control – level with the highest volume), VAH/VAL (Value Area High/Low), HVN (High Volume Node).

Thanks to this, the trader sees not only where the price moved, but why – who dominated (buyers or sellers), where volume accumulated, where absorption or exhaustion occurred.

The Footprint chart was invented by MarketDelta in the early 2000s as the first tool for visualizing order flow in the era of electronic markets. Today, it is available on platforms like TradingView, Sierra Chart, ATAS, NinjaTrader, Optimus Flow, or Bookmap. In summary, Footprint is a tool for advanced traders who want to read order flow in real time – it allows detecting institutional activity, false breakouts, reversals, or trend continuations much earlier than traditional methods. What is

## Volume Profile?

Volume Profile (eng. Volume Profile) is an advanced technical analysis tool in trading that shows the distribution of trading volume at different price levels over a specified period. Instead of showing volume only on the time axis (like a classic volume indicator under the chart), Volume Profile displays it horizontally as a histogram next to the price chart. This allows the trader to see at which price levels the most (high interest) and least (low interest) trading occurred.

Key elements of Volume Profile:

- POC (Point of Control) — The price level with the highest volume in the period. Often acts as a strong price magnet or pivot.
- VAH (Value Area High) and VAL (Value Area Low) — Upper and lower boundaries of the "value area" (typically 70% of total volume). The area between them is where the market considered the price "fair."
- HVN (High Volume Node) — Areas with high volume – typically support/resistance.
- LVN (Low Volume Node) — Areas with low volume – price often passes through them quickly (movement acceleration).

Types of Volume Profile:

- Visible Range (VPVR) — For the visible range on the chart.
- Fixed Range — For a user-selected range (e.g., last month or specific swing).
- Session Volume — For one trading session.

Difference from Market Profile:

Market Profile (TPO Profile) measures time spent at each price level (Time Price Opportunity), not volume. Volume Profile is considered more precise on electronic markets because it is based on actual turnover.

Application in trading:

- Support and resistance → HVN as price defense areas, LVN as movement targets.
- Trend confirmation → If price bounces from VAL/VAH with high volume – continuation.
- Strategies → Trading in the value area (range) or breakouts from LVN. Volume Profile is available on platforms like TradingView, Sierra Chart, NinjaTrader, ATAS, or Bookmap. It is one of the most powerful tools for institutional traders and advanced day traders.

## 6 Example of Short Interval Analysis (Minute Footprint in Tabular Form)

	18:23				18:24				18:25				18:26			
Delta Acc	40				32				44				18			
Delta	44				-8				12				-26			
Sum	64				40				59				51			
Per strike	10,8				8,0				11,8				12,8			
Strike	vol				vol				vol				vol			
6645.0																
6644.5																
6644.0																
6643.5																
6643.0	10	LVN			LVN			11	LVN				LVN			
6642.5	10	LVN			8			11								
6642.0	10				8			11					12			
6641.5	10				8			11					12			
6641.0	10				8			11					12			
6640.5	10				8								12			
6640.0																
6639.5																
6639.0																

The screenshot below shows a fragment of the Delta Analyzer® dashboard displaying data for the S&P 500 cash index across four consecutive minutes of the session (18:23 – 18:26). Upper Section – Session Summaries These rows provide a quick overview of market activity in each minute and a cumulative picture.

- Delta Acc (green background)  
Shows cumulative delta from the start of the monitored period.  
Values: 40 → 32 → 44 → 18  
Interpretation: The highest cumulative delta reached +44 (strong buyer dominance), then fell to +18 – sellers partially recovered, but net buying pressure remained.
- Delta (variable colors)  
Delta in the given minute (difference between aggressive buying and selling).  
+44 (green – strong buying) → –8 (red – selling) → +12 (green) → –26 (red – strong selling).  
Interpretation: A clear shift in sentiment is visible – from buyer dominance to two minutes of seller advantage.
- Sum  
Total volume in the minute.  
64 → 40 → 59 → 51  
Interpretation: Activity relatively stable, with no extreme spikes.
- Per strike  
Average volume per single price level in the given minute.  
10.8 → 8.0 → 11.8 → 12.8  
Interpretation: The market gradually concentrated trading on fewer levels (higher value = greater concentration).

Main Table – Data at Individual Price Levels (Strikes) Each row represents a different price level (in 0.5-point increments).

Each column represents one minute. In the cells, we see:

- Number – Volume executed exactly at that level in the given minute.
- Background color:
  - Green – positive delta at that level (more aggressive buying).
  - Red – negative delta (more aggressive selling).
  - Yellow/beige – low or neutral volume.
- LVN – Low Volume Node – a level with very low volume compared to surrounding areas (price passed through it quickly).

#### Key Observations from This Example

1. Main activity was concentrated in a narrow zone 6640.5 – 6642.5 (most green and red cells with volume 10–12).
2. In minutes 18:23 and 18:25, green coloring dominated – buyers aggressively entered at these levels.
3. In minutes 18:24 and 18:26, red cells appeared exactly at the same levels – sellers responded aggressively in areas where long positions had previously been built.
4. Levels above 6643.0 are marked as LVN – the market quickly moved past them without finding interest there (they acted as temporary resistance).
5. Levels below 6640.0 are almost empty – price did not drop lower in this time window.

#### What Does This Mean for the Trader?

- The 6640.5 – 6642.5 zone was a battlefield – buyers first, then sellers took the initiative.
- Strong negative delta in the last minute (–26) with decent volume (51) suggests sellers may push price downward toward lower, empty levels.
- LVN above acted as resistance – lack of volume confirms that an upside breakout lacked strength.

#### Tip for the User

Always start by looking at the summary rows (Delta and Delta Acc), then search for clusters of green/red cells in the table – that's where the real market battle is taking place. LVN helps identify levels through which price moves most easily.

## 7. Example of Full Dashboard View – Minute Analysis with 60-Min and 5-Min

colbarrz_018.csv		colbarrz_transactions.csv		Latest price: 6.647.00 (18.09.2025 19:04)		before session		prev		next		after session		(18:05 - 19:04)		Daily results: 0 strikes profit in 0 transactions. Success ratio 0 / 0. Max loss: 0.																
		18:55	18:56	18:57	18:58	18:59	19:00	19:01	19:02	19:03	19:04	last 60m				last 5m																
Delta Acc	224	184	158	203	215	183	218	210	177	152	152					151																
Delta	-14	-40	-26	-45	-12	-32	-35	-8	-33	-26	0					151																
Sum	40	51	45	20	32	58	43	54	42	39																						
Per strike	10.0	12.8	9.0	4.0	10.7	11.6	8.6	10.8	8.4	13.0																						
Strike	vol	vol	vol	vol	vol	vol	vol	vol	vol	vol		last trade	delta dev	delta	delta	vol	bid	ask	sig	delta	delta	vol	bid	ask								
6651.0												VAH	LVN	100	-8	8	0		LVN	100	-8	8	0									
6650.5	VAH	LVN	VAH	LVN	VAH	LVN	VAH	LVN	VAH	LVN	VAH	LVN	LVN	8	LVN	100	-16	16	0	LVN	100	-8	8	0								
6650.0	LVN	LVN	LVN	LVN	LVN	LVN	LVN	LVN	LVN	LVN	LVN	LVN	LVN	8	LVN	100	-16	16	0	LVN	100	-8	8	0								
6649.5														8	76	-45	71	54	8	57	-3	20	11	8								
6649.0														10	HVN	52	6	101	47	54	65	9	51	10	20							
6648.5	10	POC	HVN	POC	HVN	POC	HVN	11	POC	HVN	10	POC	HVN	10	POC	HVN	10	POC	HVN	10	POC	HVN	10	POC	HVN	10						
6648.0	10	HVN	HVN	HVN	HVN	HVN	HVN	11	HVN	HVN	10	HVN	HVN	8	HVN	66	-52	161	107	54	VAH	51	0	22	10	11						
6647.5	10	HVN	12	HVN	9	HVN	4	HVN	11	VAL	HVN	10	VAL	HVN	8	VAL	HVN	10	POC	HVN	55	17	170	76	93	POC	HVN	73	-20	43	32	11
6647.0	10	VAL	HVN	12	VAL	HVN	9	VAL	HVN	10	VAL	HVN	10	VAL	HVN	8	VAL	HVN	10	VAL	HVN	45	0	129	58	57	HVN	58	0	32	8	10
6646.5														13	HVN	51	-2	114	58	76	VAL	60	4	21	8	15						
6646.0														8		82	59	91	15	76	LVN	100	8	8	0	8						
6645.5														5		76	31	59	13	49												
6645.0														2		80	25	41	8	80												
6644.5														9		100	33	33	0	33												
6644.0														10		70	14	94	10	24												
6643.5														8		69	-17	46	31	14												
6643.0														4		75	29	76	57	19												
6642.5														6		51	-3	91	47	43												
6642.0																6	VAL	HVN	60	21	102	40	62									
6641.5														3		55	-13	83	45	34												
6641.0														5		73	39	83	22	61												
6640.5														12		53	5	88	41	46												
6640.0														8		78	-29	69	54	15												
6639.5														8		57	-12	84	48	36												
6639.0														9		54	-7	93	40	35												

SummariesThe screenshot below shows a typical, full view of Delta Analyzer® for the S&P 500 cash index (SPX cash). We see transaction data from individual minutes of the session (from 18:55 to 19:04) as well as two important summary columns on the right:

- last 60m – total activity from the last 60 minutes
- last 5m – total activity from the last 5 minutes

This allows simultaneous tracking of both short-term dynamics (what is happening "right now") and broader context.Upper Section – Session SummariesThese rows provide an immediate picture of market sentiment and activity.

- Delta Acc (green/red background)  
Cumulative delta from the start of the monitored period (or reset).  
Values range from 224 to 152, ending at –32 in the last 5 minutes.  
Interpretation: For most of the time, buyers had the advantage (positive values), but in the last minutes, sellers attacked strongly – cumulative delta dropped dramatically.
- Delta (colored cells)  
Delta in the given minute.  
Examples: +14, –40, +26, –45, +12, –32, +35, –8, –33, –26 → last 5 min: +151 → –32.  
Interpretation: Highly variable sentiment – buying and selling alternating, but the last 5 minutes show a strong shift toward selling (–32).
- Sum  
Total volume in the minute.  
Fluctuations from 20 to 58, in the last 5 min: 53 (normal activity).  
In summary columns: last 60m = 531, last 5m = 236 (the last 5 minutes were active).
- Per strike  
Average volume per single price level.



In the last 5 minutes: -2.9 → 21.5 (indicates high concentration of trading on a few levels).

Main Table – Data at Price Levels (Strikes) Each row = a price level (in 0.5-point increments, from 6651.0 at the top to 6639.0 at the bottom).

Minute columns show volume and markings (POC, HVN, VAH, VAL, LVN) for each minute.

On the right – detailed data from the last 60 min and 5 min (including delta%, delta vol, bid, ask, SIS). Key Markings (Colored Highlights)

- POC (yellow/red) – Point of Control: level with the highest volume in the given minute (most traded).  
Often at 6648.5–6647.5.
- HVN (green) – High Volume Node: high-volume area – strong support/resistance.
- VAH/VAL (yellow/pink) – Value Area High/Low: boundaries of the value area (approx. 70% of volume).
- LVN (gray/white) – Low Volume Node: levels with low volume – price passes through them quickly.

What Do We See in This Example?

1. Main activity zone was around 6645.0 – 6649.0 – most POC, HVN, and colored cells there.
2. In individual minutes, POC "migrated" downward (from 6648.5 to lower levels) – a sign of market acceptance of lower prices.
3. In the last 60m column, we see a clear volume profile:
  - Highest volume and HVN at 6645.0–6647.0
  - POC at 6645.0 (yellow highlights)
  - VAH/VAL covering a narrow range – the market was in balance in this zone for an hour.
4. In the last 5m column (red coloring):
  - Strong negative delta (-32, -20, -43)
  - Many red cells at lower levels (6645.0 and below)
  - Sellers aggressively entered levels that were previously HVN/POC – a sign of potential support breakdown and continuation of the decline.

How to Use This in Trading? (Tips for the User)

- Compare columns: Check whether short-term action (last 5m) confirms or negates the broader context (last 60m).  
Here: the last 5 minutes show strong selling at previous support levels → potential short signal or caution with longs.
- Track POC migration: If POC moves lower minute by minute – the market accepts lower prices (downtrend).
- Reaction to HVN/POC: Aggressive selling (red cells) exactly at HVN/POC from the last 60 min is often a reversal or downside breakout signal.
- LVN as targets: Levels with LVN below the current price (e.g., 6640.0 and lower) may be the target of the move if sellers maintain pressure.

Practical Tip Always start by looking at the summary columns (last 60m and last 5m) – they provide the fastest context. Then search the table for clusters of green/red

cells and changes in POC/HVN positions. This will allow you to instantly assess who is controlling the market on SPX cash at any given moment.

**8. Example of 1-Hour View – Shape of a "Candle" Footprint in Tabular Form**The screenshot below shows Delta Analyzer® presenting data for the S&P 500 cash index in a 1-hour interval (column marked 18/17:00).

18/17:00							
Delta Acc	-968						
Delta	12						
Sum	49	11	4132	2050	2062		
Per strike		0,6	206,6				
Strike	delta%	delta	vol	bid	ask	ACC	
6649							
6648 LVN	100	-19	19	19	0	HVN	
6647 LVN	77	-47	85	66	19	HVN	
6646 VAH	74	-90	185	138	47	VAH, HVN	
6645 HVN	65	-100	326	213	113	HVN	
6644	47	-2	283	133	131	HVN	
6643	61	-68	306	187	119	HVN	
6642	60	54	267	106	161		
6641 POC, HVN	57	-58	396	227	169		
6640	53	-18	273	145	127		
6639 HVN	57	51	330	139	190		
6638 HVN	64	92	319	113	205		
6637 VAL, HVN	62	79	322	121	201		
6636	69	119	299	89	209		
6635	58	-36	210	123	86		
6634	51	3	171	83	87		
6633 LVN	57	-12	79	45	33		
6632	53	-7	103	55	48		
6631 LVN	54	7	83	38	45	HVN	
6630 LVN	100	41	41	0	41	POC, HVN	
6629 LVN	100	24	24	0	24	HVN	
6628						HVN	

This is the equivalent of one large "candle" on a classic candlestick chart, but instead of just OHLC and total volume, we see the full distribution of volume, delta, and key levels within that hour. Upper Section – Summaries for This Hour

- Delta Acc: -968  
Interpretation: During this hour, sellers had a decisive, very strong advantage (cumulative delta strongly negative).
- Delta: 12  
Interpretation: Current delta (or hour-close delta) slightly positive – perhaps buyers tried to recover in the final minutes, but they failed to reverse the overall picture of the hour.
- Sum: 49 | 11 | 4132 | 2050 | 2062  
Interpretation: Total volume in the hour is the sum of these values (approx. 8300+ units) – very high activity, indicating an intense battle.
- Per strike: 0.6 | 206.6  
Interpretation: On average, very little on most levels (0.6), but enormous concentration on key levels (206.6) – typical for a session with clear direction.

Main Table – Shape of the 1-Hour "Candle" Each row represents a price level (strikes in 0.5–1 point increments).

Cells show:

- delta% (first number, e.g., 100, 77, 74...)
- delta (second number, e.g., -19, -47, -90...)
- vol (third number – volume at the level)
- bid / ask (fourth and fifth)
- ACC – profile marking (HVN, POC, VAH, VAL, LVN) with colored background.

Analysis of the Shape of This 1-Hour "Candle"

1. Top of the candle (high strikes)
  - 6649–6648: LVN and HVN with negative delta (-19).
  - The market quickly rejected higher levels – classic "upper wick" of a bearish candle.
2. Opening area and main activity
  - Levels 6647–6644: high volumes (66, 138, 213, 138) and strongly negative delta (-47, -90, -100, -2).
  - Red highlights and HVN/VAH/VAL markings – this is where the main battle took place, but sellers dominated.
3. Middle and bottom of the candle
  - 6641–6637: POC at 6641 (yellow highlight, delta 57 | -58 | volume 396 – the highest!).
  - Strong red cells at 6637–6634 (delta% 62–51, volume 319–171, red background).
  - This is the body of the bearish candle – sellers consistently pushed price lower with high volume.
4. Bottom of the candle (lower wick)
  - 6632–6628: LVN and HVN with lower volume, mixed delta (e.g., -12, 7, 41, 24).
  - The market reached lower levels but did not hold them long – buyers lightly defended (green HVN/POC at 6630–6629), creating a small lower wick.

Overall Interpretation of This 1-Hour "Candle"

- Shape: Clearly bearish – long downward body, upper wick (rejection of higher prices), short lower wick (weak defense of the low).

- Seller dominance: Cumulative delta –968, most key levels (HVN) with negative delta and red coloring.
- POC at 6641: The market spent the most time and volume at this level – this is the "point of control" for the hour, a potential support in the next hour (if price returns) or resistance on a retest.
- High volume on the decline: Selling was not panicked (no extreme LVN at the bottom) but consistent and convincing → continuation of the downtrend is likely.

#### Tips for the User

- Treat the 1-hour view like a classic H1 candle, but with a huge advantage in order flow details.
- Always check where the POC is (yellow highlight) – it acts as a price magnet in the near term.
- Compare Delta Acc with the direction of price movement – divergence (e.g., positive delta on a decline) may signal absorption and reversal.
- Look for HVN with negative delta at high levels (like here 6645–6644) – these are places where sellers entered most aggressively and may defend on a retest.

With this view, you can read a 1-hour "candle" much more deeply than on a regular chart – you see not only what happened, but why and who controlled the market.

### **9. Example of Comparative View – 1-Hour Interval + Last 60 Minutes + Entire Day**

	18/19:00								last 60m						today					
Delta Acc	-622								271						-494					
Delta	-33								271						-623					
Sum		52	-32	235	124	91				54	271	2712	1204	1475		49	-623	40587	20242	19619
Per strike			-5,5	39,3							12,9	129,2					-10,7	699,8		
Strike		delta%	delta	vol	bid	ask	ACC			delta%	delta	vol	bid	ask	ctx	delta%	delta	vol	bid	ask
6652																52	-41	702	371	330
6651	LVN	100	-14	14	14	0			VAH, LVN	100	-14	14	14	0		55	-115	723	404	288
6650	LVN	100	-14	14	14	0			LVN	100	-27	27	27	0		58	-151	915	533	382
6649		65	15	51	18	33				46	0	168	77	78		57	-164	1011	581	416
6648	VAH	62	-12	51	32	19	HVN		HVN	56	36	291	127	164	HVN	53	-112	1380	739	627
6647	POC, HVN	45	-12	70	32	19	HVN		POC, HVN	53	43	310	123	167	HVN	49	-13	1316	655	641
6646	VAL	58	5	33	14	19	HVN		HVN	55	22	218	97	120	HVN	54	-130	1254	682	552
6645							VAH, HVN			74	49	99	24	74	VAH, HVN	56	-157	1246	701	544
6644							HVN			80	43	71	13	57	HVN	53	88	1114	503	591
6643							HVN			64	-43	144	93	50	HVN	52	-56	1143	595	538
6642									VAL	59	37	187	75	112		55	93	905	405	499
6641										54	12	135	61	73		50	15	919	451	467
6640										55	-17	168	92	75		55	-91	881	486	395
6639										53	11	180	84	95		48	-1	1006	491	490
6638										80	102	168	33	135		65	310	1021	355	665
6637									LVN	68	-17	48	33	15		55	104	830	353	458
6636										60	-18	89	53	35		57	152	703	252	405
6635										63	-29	111	70	40		55	74	642	283	358
6634										52	-6	112	59	53		51	13	555	271	284
6633										56	12	92	39	52		54	-55	600	328	272
6632									LVN	100	53	53	0	53		51	-79	960	498	418
6631							HVN		LVN	100	19	19	0	19	HVN	56	-177	1225	691	513
6630							POC, HVN								POC, HVN	52	-88	1478	777	689

This screenshot highlights one of the most powerful features of Delta Analyzer® – the ability to simultaneously compare three time perspectives for the S&P 500 cash index:

- Left block column (18/19:00) – data for a single hour (from 18:00 to 19:00)
- Middle column (last 60m) – summary of the last 60 minutes (short-term context)
- Right column (today) – summary of the entire trading day

This allows you to quickly assess whether the current action aligns with the broader daily trend or if there is a short-term deviation. Upper Section – Summaries for Each Perspective

- Delta Acc  
1h: -622 (red background) | last 60m: +271 (green) | today: -494 (red)  
Interpretation: The 18–19 hour was strongly bearish (-622), but in the last 60 minutes buyers recovered some losses (+271). The entire day remains net bearish (-494) – sellers dominate in the longer perspective.
- Delta  
1h: -33 | last 60m: +271 | today: -623

Interpretation: In the analyzed hour, sellers had the advantage, but the last 60 minutes show a strong buyer rebound. The entire day, however, remains under seller control.

- Sum (total volume)  
1h: 52 | -32 | 235 | 124 | 91 → total approx. 470  
last 60m: 54 | 271 | 2712 | 1204 | 1475  
today: 49 | -623 | 40587 | 20242 | 19619  
Interpretation: The last hour had moderate volume, the last 60 minutes – higher, and the entire day – very high turnover (over 80k units).
- Per strike  
Shows volume concentration at levels – the higher the value, the more trading focused on individual strikes.

Main Table – Comparison of Volume and Delta Profiles  
Each row = a price level.  
Colors and markings (POC, HVN, VAH/VAL, LVN) show market structure in each perspective.  
Key Observations from This Example

1. 1-hour interval (left part)
  - Main activity around 6647–6645 (POC at 6647, VAH/HVN in this zone).
  - Red cells and negative delta (-12, -122) – sellers dominated.
  - POC at 6647 (blue row highlight) – the market traded most at this level in that hour.
2. Last 60 minutes (middle column – green coloring)
  - POC shifted lower to 6647, but with positive delta (+43, +310).
  - Many green HVN and VAH/VAL lower (6645–6642).
  - Strong positive delta (+271) and high volume → buyers took short-term control, defending and absorbing selling at lower levels.
3. Entire day (right column – mixed/red coloring)
  - POC lowest – at 6630 (yellow HVN/POC highlight).
  - Very high volumes at lower levels (1478, 1316, 1254, 1246).
  - Negative delta on most levels (e.g., -1316, -1254) and red cells → sellers controlled the entire day, pushing price significantly lower.
  - HVN/POC at 6630 suggests the market accepted much lower prices in the daily perspective.

What Does This Mean for the Trader? (Practical Insights)

- Perspective conflict:  
The entire day and the analyzed hour were bearish, but the last 60 minutes show a strong buyer rebound (green profile, positive delta).  
This is a classic scenario for a potential short-term counter-trend move or bear trap – buyers defending lower levels after a daily decline.
- POC migration:  
From 6647 (hour) → 6647 (60m) → 6630 (day) – the market shifted the "point of control" significantly lower during the day → acceptance of lower prices in the longer perspective.
- Possible scenarios:
  - If buyers maintain advantage in the next 60 minutes – possible retest of higher levels (6647–6650).
  - If the daily seller trend returns – breakdown of POC 6630 and further decline.

#### Tips for the User

- Always compare the three columns side by side – look for discrepancies between short and long term.
- Green last 60m with red today = potential short-term long opportunity (rebound).
- Red last 60m with green today = possible exhaustion of the uptrend.
- Pay attention to downward/upward shifts in POC and HVN – this shows where the market "feels comfortable" in a given perspective.
- Use this view especially at session close – it helps evaluate whether the daily close will align with the dominant trend or be disrupted by short-term action.

With this comparative view, Delta Analyzer® gives you a unique ability to see the market across three time scales simultaneously – a huge advantage when making decisions on SPX cash.

#### Part IV Delta Analyzer Strategies

Delta Analyzer® is fully optimized for S&P 500 cash index analysis. Use the table to monitor delta on SPX. Look for HVN clusters as support during corrections.

Example: If delta acc >0 in the last hour, confirm longs on SPX cash.

##### 1 Confirming Trend Direction Using Cumulative Delta

- Signal: Delta Acc in the "last 60m" or "today" column clearly positive (> +200) with green HVN clusters.
- Interpretation: Buyers aggressively defend levels – upward trend has continuation.
- Action: Look for longs on bounces from VAL or HVN from the last 60 minutes, especially when POC is migrating upward.
- Dashboard Example: When Delta Acc in the last hour >0 with green HVN on lows (like in the minute view with green cells 10–12), confirm long entry.

##### 2 Trading Rebounds After Strong Selling (Absorption)

- Signal: Delta Acc for the entire day strongly negative (e.g., –494 or –968), but in "last 60m" or "last 5m" a clear positive delta appears (+271 or more) with green HVN on lower levels.
- Interpretation: Sellers have exhausted themselves, institutional buyers enter and absorb supply.
- Action: Enter long at the close of the hour with a green profile, target – retest POC or VAH from the entire day.
- Dashboard Example: Comparative view 1h + 60m + day – red day, but green last 60 minutes with POC shifted only slightly down and positive delta.

##### 3 Short After Breaking Support with Delta Confirmation

- Signal: Red cells and negative delta on previous HVN/POC from "last 60m" or entire day, Delta Acc falling, POC migrating clearly downward.
- Interpretation: Sellers have taken control, support breaks with conviction.
- Action: Enter short after closing the hour with a red profile, target – next LVN below current POC.



- Dashboard Example: 1-hour view with Delta Acc –968, red HVN on higher levels and POC lower – classic falling candle Footprint.

#### 4 Trading in Range (Rotation) – Using VAH/VAL

- Signal: Narrow value area (VAH and VAL close together) in "last 60m" and entire day, mixed colors (green and red cells alternating), delta oscillating around zero.
- Interpretation: Market in balance, lack of conviction from either side.
- Action: Buy near VAL, sell near VAH, avoid directional positions.
- Dashboard Example: View with narrow HVN zone around 6645–6647 and stable POC through several intervals.

#### 5 Detecting Potential Reversal at Delta Extremes

- Signal: Extremely negative delta in a single hour or 5 minutes (e.g., –122 or –43 at a key level), but price does not make a new low and a green cell with high volume appears at the same level in the next interval.
- Interpretation: Sellers have been absorbed – delta/price divergence.
- Action: Prepare long with a tight stop below the last LVN.
- Dashboard Example: Minute view with red series of cells on 6641–6640, followed by green rebound with higher volume.

#### 6 Avoiding Traps – False Breakouts Confirmed by Low Volume

- Signal: Price exits above VAH or below VAL, but in the breakout interval column, volume is low, delta opposite to the move, and levels marked as LVN.
- Interpretation: Lack of engagement from big players – false breakout.
- Action: Do not enter in the breakout direction, prepare opposite position on return to Value Area.
- Dashboard Example: LVN above current price with zero or very low volume in the breakout column.

#### 7 Scalping on Short-Term POC Migration

- Signal: In minute views, POC shifts consistently up or down from minute to minute with increasing volume and consistent delta.
- Interpretation: Market accepts new levels – mini-trend intraday.
- Action: Join the POC migration direction with entries on pullbacks to previous POC.
- Dashboard Example: Series of minutes with POC descending from 6648.5 → 6647.5 → 6645.5 with red cells.

#### 8 Filtering Signals from Other Methods

- Signal: Your favorite technical setup (e.g., breakout from formation, MA crossover) appears on a classic chart.
- Action: Confirm only if the dashboard shows consistent delta and volume (e.g., upward breakout only with green delta and HVN on support).
- Interpretation: Delta Analyzer® acts as a filter eliminating most false signals.

Remember: No strategy is sacred – always adjust risk to current SPX volatility and combine observations from multiple intervals (minute + 60m + day). The best results are achieved when delta, volume, and profile structure (HVN/POC) point in the same direction.

Part V Conclusions

Delta Analyzer® is a unique, specialized tool for analyzing S&P 500 cash, which will enrich your trading on this instrument. It shows not only where price moves, but who really controls the market – buyers or sellers – and at which levels the battle takes place. Practice regularly on historical views, experiment with the presented strategies, and observe how the dashboard communicates market intentions. Over time, colors, POC migrations, and delta changes will become as readable to you as classic candles. Visit our site for dashboard updates and new examples.

Good luck in SPX trading – may the delta be with you!

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