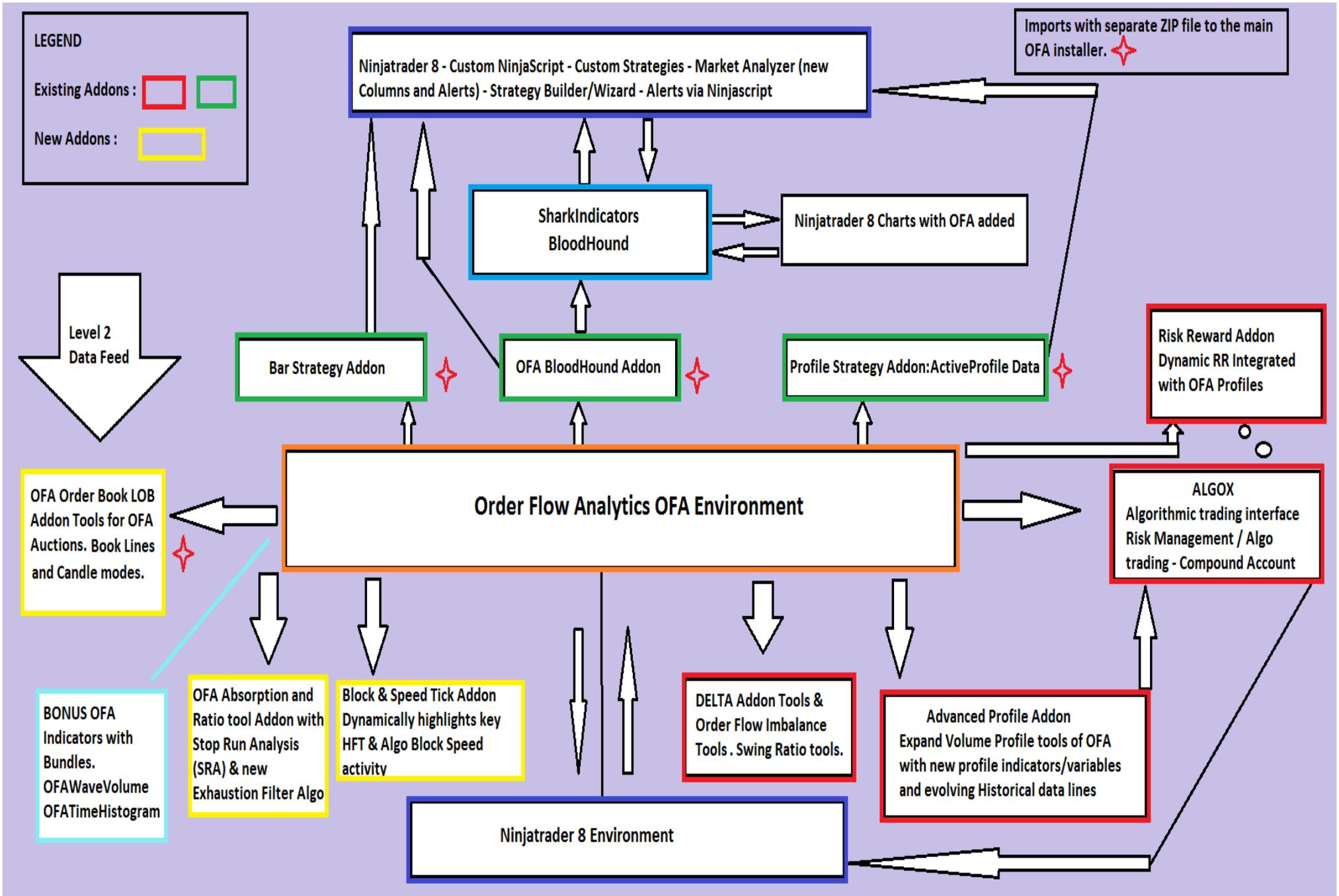


Table of Contents for the BONUS OFAWaveVolume ® & OFATimeHistogram ® Indicators

- 1. Component Overview of OFA and the updated OFA Addon Suite and the new Addon(s) and interaction with OFA / Ninjatrade 8 components.**
- 2. Introductory Summary of OFAWaveVolume ® & OFATimeHistogram ® Indicators.**
- 3. Settings process**
- 4. 6 Case Study examples of the indicators including time/date/contract table for interactive learning in NT8 replay.**
- 5. FAQ Section.**

Disclaimer – to be clear there is no affiliation to the references made in this document to a 'similar' indicator available on other 'older' platforms – the process and calculation is different as is the OFA Auction/Bar building process. The purpose and function of this tool for OFA is to enhance the foundation of this tool for OFA Auction Bars with its own tolerance and accumulation process. Some patterns of inside bars are addressed in the calculation with provision of a simple tolerance/adjustment parameter to define the number of ticks to allow for this. This is proprietary to OFA as to the exact accumulation logic but you can see where inside bars are accommodated in certain scenarios.



OFA Wave Volume ®/Time Histogram ® Addon Summary

Following from my own research and usage of the Wyckoff method in my trading particularly for the Accumulation zones and the process for this, my attention was drawn to this volume process many years ago. I found it a very valuable and revealing tool in general, but in combining with the OFA Auction process you can see in the Case Studies the effective application of OFA Wave Volume for OFA Probe and Rotation Auctions.

Combined with a means to present the time element of OFA Non-time based Auctions (Probe & Rotation) this set of indicators illustrates and highlights using color thresholds, where particular or a series of OFA Probe & Rotation Auctions spend more 'time'. These can reveal interesting price zones and levels to mark using the OFA tools ie the Decision Point Profile (using the extended POC and VAH/VAL) to note the future interaction of price and these levels.

Volume is freely provided data that is mostly Underused by traders. We do cover delta volume and other tools in the Delta Addon and I have always referenced volume in various ways including simple bar / auction volume. With this approach of the waves and swing volume you can get a clearer read on the buying and selling waves.

OFA Wave Volume ® Indicator

Rather than using some volume oscillator with moving averages to approximate and smooth out the volume – why not use something which is a more accurate representation of the volume. As the market and price movement unfolds in a series of buying and selling Waves, these prices do not unfold in bundles of equal time. Combined with OFA Probe and Rotation (Non-time based) Bars and thus a more natural movement of price and orderflow, by not subdividing the volume into time periods you are not obscuring the true force of the buying and selling waves. This software indicator provides a unique and highly valuable insight into the market's true structure.

Wave charts were first created by Richard Wyckoff as part of his tape reading techniques. He encouraged students to **'think in waves'** ; and thus wave analysis was an integral part of his trading method. I encourage you to seek out examples of this in your online search and see the link suggestions below. Please note that this is distinct from and separate to the Elliot wave method.

I have provided a few links below which serve as some background/education and research for those who want to look deeper into this and the Wyckoff Phases and process. Note as per the top of the document there is no affiliation to these sites or people. I did buy the 'Trades about to Happen' book by David Weis many years ago and so familiar with this process.

[Weis Wave Plugin: A Modern Adaptation of the Wyckoff Wave & Volume \(weisonwyckoff.com\)](http://weisonwyckoff.com)

You can see what this sells for on the above page and this was built with time-based charts in mind. The OFA version uses a different logic process with a tolerance tick adjustment (as outlined in the settings section below) and combines with the OFA Auction Bar process.

This is provided free with a bundle of 2 or more of OFA Book/OFA Absorption SRA/OFA Block Speed Tick
Beyond this launch these 2 indicators in this Add-On may be sold separately.

[Weis Wave Plugin - Trading Psychology Edge](#)

Some additional references and application examples of usage.

[The Wyckoff Method: A Tutorial \[ChartSchool\] \(stockcharts.com\)](http://stockcharts.com)

This is a great reference to the methodology and schematics for the accumulation and distribution phases relating to Wyckoff Events. Interestingly this is the basis of several up to date education and training processes on how the professionals trade.

Questions to ask in the process of observing and assessing/analysing the Buy and Sell Waves

A key part of the Wave Volumes is comparing the relative volume of the swings and comparing the Effort vs Result.

For a larger Wave volume did the price progress relative to other waves or is there any indication of absorption in the Wave move (Up or Down).
With practice / observation and experience you will detect clues of changes in the trend and where momentum follows through vs absorption.

Look for waning / declining up waves into the Highs and waning / declining down waves into the lows.

With wave volume - how far did the swing move in ticks relative to prior swings ? Did it move less with same volume? ; indicative of absorption.

Observe where buyers pick up at the lows and sellers pick up at the highs - is there follow through or absorption
what do they do with the volumes and the stops in any liquidity area ?

Looking for evidence of Selling at lower prices from the highs as a key sign that the market may be progressing lower
and then buying at higher prices from the lows as sign that the market may be progressing higher.

OFA Time Histogram ® Indicator

This histogram represents the relative time spent for each Auction/Bar revealing some key interesting information. It highlights some price/zones where time was spent before reversal / continuation higher / lower.

With the main OFA bar type being Probe and Rotation and this being non-time based, this adds a time element to the process. Whilst the time element is taken out in the OFA (Probe & Rotation) Auction Process in a different modified process to Point and Figure – it still takes time to accumulate orders so having this time element can reveal some key price zones of activity.

Using this histogram with 4 configurable threshold color ranges, we can observe price zone locations where 'TIME' was spent in that auction bar or series of auction bars. You can then readily observe these zones being tested and can be 'leaned on' for support or resistance zones for trades.

Also they can be very useful price zones to apply a **Decision Point Profile** around those bar clusters and then observe the extended POC VAH VAL lines from this small group of bar/auctions.

Questions to ask - what happens to the volume / activity in the price zone where auction spent above average time ?

Use DP tool around a small cluster of larger time histogram bars relative to the neighbouring auctions. Note the Level and the POC/VAH/VAL of this and with the extended lines (available with advanced profile addon) you can see the interaction of price / retesting vs break above/below of these zones.

? ✖

Properties

- ▼ **Parameters**
 - LowThreshold
 - UpperThreshold
 - ExtremeThreshold
- ▼ **Data Series**
 - Input series
- ▼ **Setup**
 - Calculate
 - Label
 - Maximum bars look back
- ▼ **Visual**
 - Auto scale
 - Displacement
 - Display in Data Box
 - Panel
 - Price marker(s)
 - Scale justification
 - Visible
- ▼ **Plots**
 - ▶ NormalColor Bar, Solid, 4px
 - ▶ LowerThresholdColor Bar, Solid, 4px
 - ▶ UpperThresholdColor Bar, Solid, 4px
 - ▶ ExtremeThresholdColor Bar, Solid, 4px

template

OFA Time Histogram ® Indicator Parameters in the above Screenshot Figure

To add this Indicator to a lower chart panel, select from the Ninja Indicators panel or right click chart pane and select Indicators....

LowThreshold – this defines the lowest time threshold in **seconds** – any bar time less than this value will appear in the LowerThreshold Color & width defined in the Plots.

UpperThreshold – this defines the upper time threshold in seconds – any bar time greater than this value will appear in the UpperThreshold Color & width defined in the Plots.

ExtremeThreshold – this defines the extreme time threshold in seconds – any bar time greater than this value will appear in the ExtremeThreshold Color & width defined in the Plots.

Plots as histogram

NormalColor – for bar time values **between the LowThreshold & UpperThreshold** setting use this Color/Width

LowerThresholdColor – for bar time values **less than** the LowThreshold setting use this Color/Width

UpperThresholdColor – for bar time values **greater than** the UpperThreshold setting use this Color/Width

ExtremeThresholdColor – for bar time values **greater than** the ExtremeThreshold setting use this Color/Width



Properties

Parameters

TickTolerance

3

Data Series

Input series

ES 09-22 (OFA®(6/3))

Setup

Calculate

On bar close

Label

OFAWaveVolume ©

Maximum bars look back

256

Visual

Auto scale



Displacement

0

Display in Data Box



Panel

5

Price marker(s)



Scale justification

Right

Visible



Plots

UpBar

 Line, Solid, 1px

DownBar

 Line, Solid, 1px

NeutralBar

 Line, Solid, 1px

VolAccumLine

 Bar, Solid, 6px

template

OK

Cancel

Apply

OFA Wave Volume ® Indicator Parameters in the above Screenshot Figure

To add this Indicator to a lower chart panel, select from the Ninja Indicators panel or right click chart pane and select Indicators....

TickTolerance – using the ofa method of capturing certain instances of inside bars this defines a threshold for any difference to be \leq to this value – default is 3 but can be increased to x .. check max. This facilitates the method to define a smoother contiguous Swing up or down before the swing is broken by a change in direction.

Plots as histogram

UpBar – this setting defines the Color of the Up Swing Bars – see VolAccumLine to set the width

DownBar – this setting defines the Color of the Down Swing Bars – see VolAccumLine to set the width

NeutralBar – this setting defines the Color of the Neutral Bars – these will rarely show in an OFA Probe and Rotation bar and more likely to show in an OFA Minutes/Seconds bar.

VolAccumLine – this setting is used internally tracking the swings and also defines the **Width setting** of each bar

Note :

It is recommended to run this indicator on an **On Bar Close Basis**. Please note that based on future bar(s) which according to internal OFA rules can complete / continue the current swing ; this indicator looks back a few bars to accomplish this process. So once a new bar starts depending on the current state of the swing and auctions the colors and swing may adjust for the prior few bars. This is not so much a repaint situation as has been referred to in past systems but a necessary adjustment in order to provide contiguous Swing information based on OFA Auctions.

Case Studies

The next section contains 6 case studies, illustrating this Addon features with annotated charts. Some of the case studies also include elements from the other Addons in this launch release ie OFA Block & Speed / OFA Absorption SRA & OFA Book.

Prior to the Annotated Charts you will see a table of information relating to these Case Studies. This has been provided to facilitate learning and training of this Addon in addition to the video whereby you can load the contract data into Replay in NT8 and enable the settings that apply in each case. By interacting with the chart in NT8 and following the key points in the chart annotation it will hopefully enable a more interactive approach to these case studies. Please note for replay mode – there is a section in the last AlgoX lesson in the NT8 tutorials which covers some tips on using Replay mode in NT8. It is recommended to load one chart at a time and ensuring you have the data loaded for the days you are interested in. Some of the earlier bugs/issues in Replay have been resolved over the last few years thereby hopefully will make this a smoother process.

The table reflects the charts in order of appearance in the document following the table. The date and the time note is GMT – for EST time please subtract 5 hours; this refers to the leftmost bars in the chart view. For other times zones eg central / pacific or asia time zones please adjust accordingly.

Date	Contract/Expiry	OFA Bar Settings	Time (GMT – for EST subtract 5)
5 th August 2022	gc 12-22	ofa 6/3	14:31:00
8 th August 2022	gc 12-22	ofa 6/3	13:34:00
5 th August 2022	cl 09-22	ofa 7/3	15:45:00
4 th August 2022	cl 09-22	ofa 7/3	14:31:00
1 st August 2022	cl 09-22	ofa 7/3	16:01:00
1 st September 2022	es 09-22	ofa 6/3	15:00:00

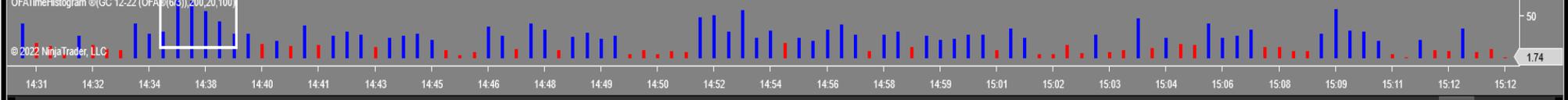
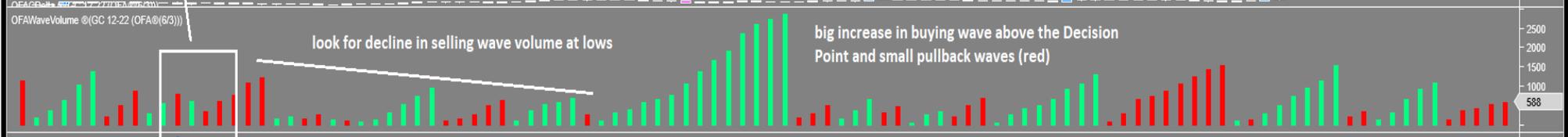
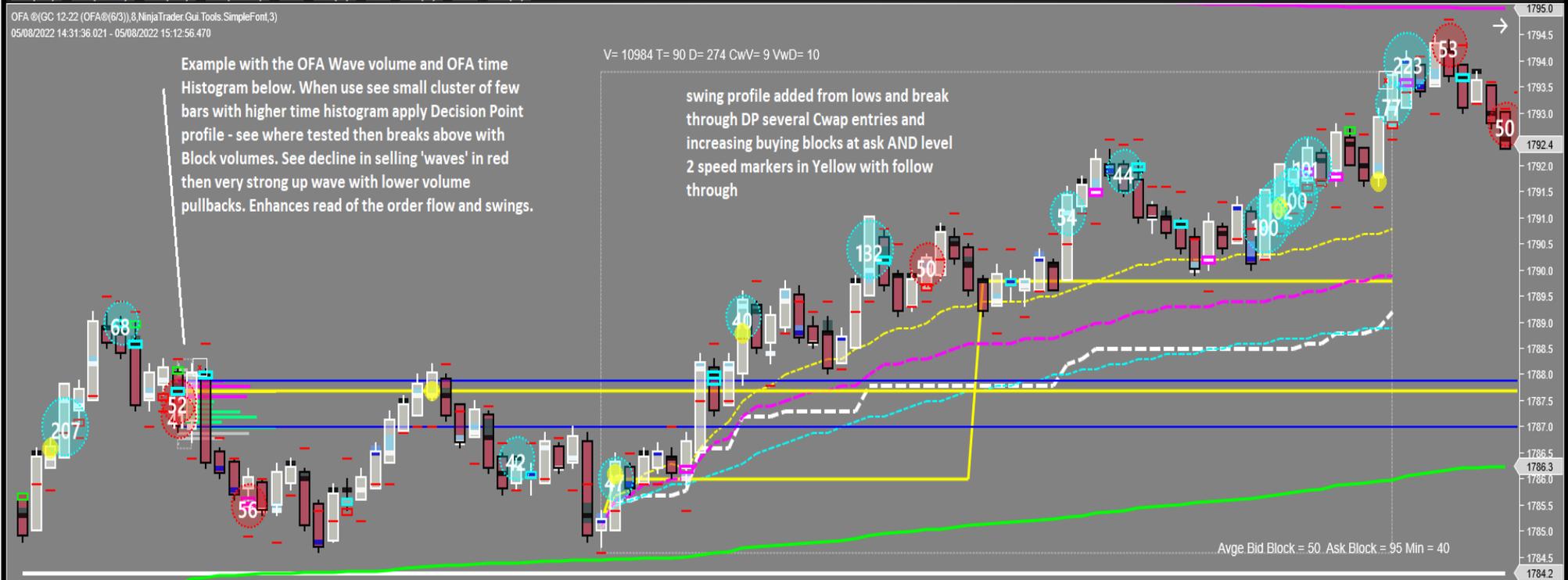
DP(1B) DP(1B A) DP(XB) DP(XB A) RP RP(A) SP SP(A) DP DP(A)

OFA @ (GC 12-22 (OFA@ (6/3)), 8, NinjaTrader.Gui.Tools.SimpleFont, 3)
 05/08/2022 14:31:36.021 - 05/08/2022 15:12:56.470

V= 10984 T= 90 D= 274 CwV= 9 VwD= 10

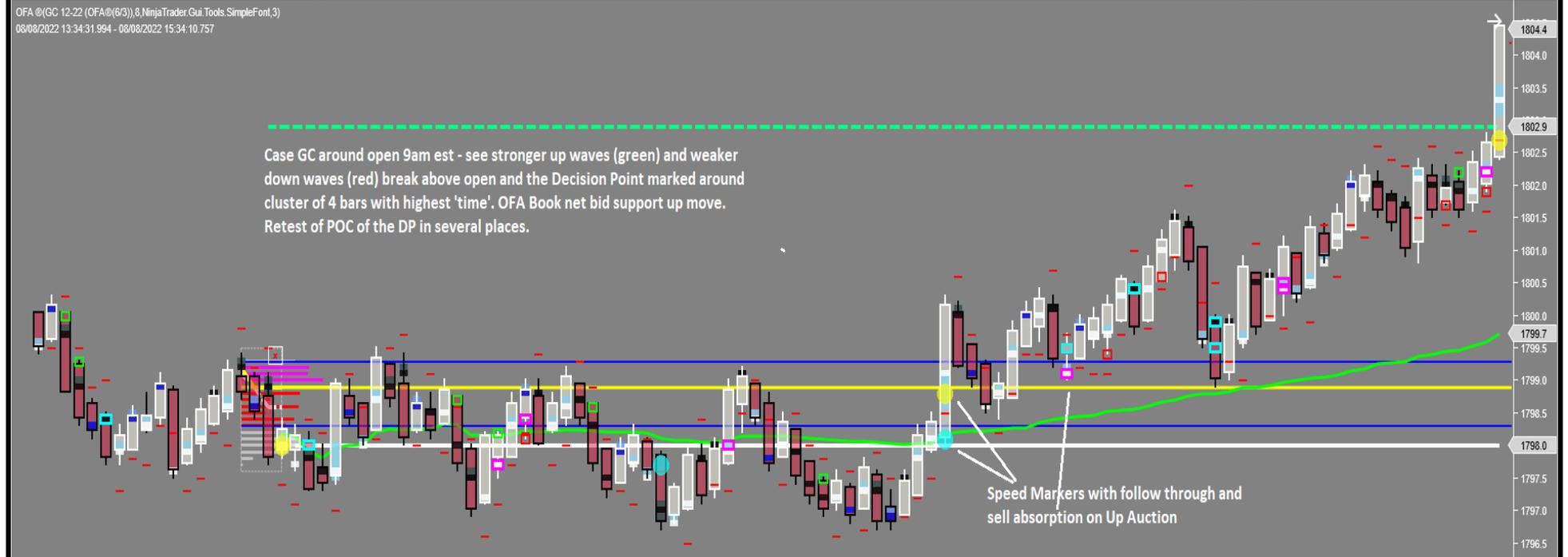
Example with the OFA Wave volume and OFA time Histogram below. When use see small cluster of few bars with higher time histogram apply Decision Point swing profile - see where tested then breaks above with Block volumes. See decline in selling 'waves' in red then very strong up wave with lower volume pullbacks. Enhances read of the order flow and swings.

swing profile added from lows and break through DP several Cwap entries and increasing buying blocks at ask AND level 2 speed markers in Yellow with follow through

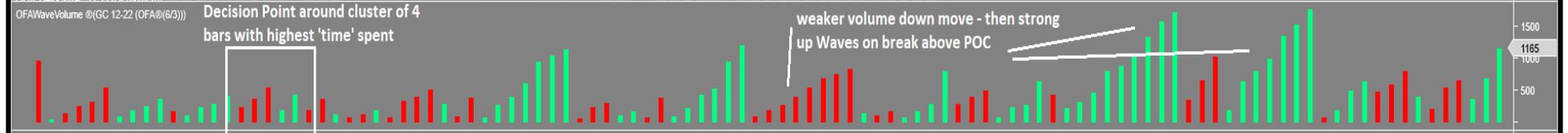


OFA @ (GC 12-22 (OFA@ (6/3)), 8, NinjaTrader.Gui.Tools.SimpleFont, 3)
08/08/2022 13:34:31.994 - 08/08/2022 15:34:10.757

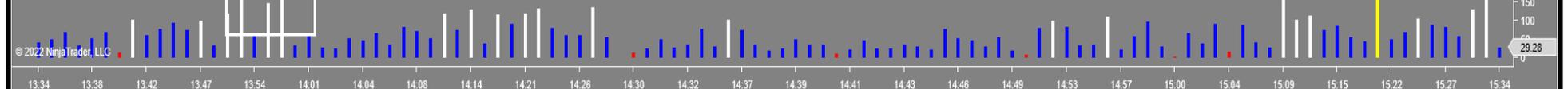
Case GC around open 9am est - see stronger up waves (green) and weaker down waves (red) break above open and the Decision Point marked around cluster of 4 bars with highest 'time'. OFA Book net bid support up move. Retest of POC of the DP in several places.



OFABookLines @ (GC 12-22 (OFA@ (6/3)), 1, 100, 8, true)
OFABook @ (GC 12-22 (OFA@ (6/3)), true, true, 1, 100, 8, true)



OFAWaveVolume @ (GC 12-22 (OFA@ (6/3)))
OFATimeHistogram @ (GC 12-22 (OFA@ (6/3)), 200, 20, 100)

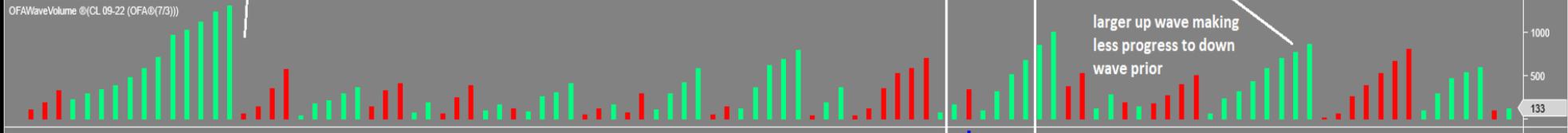
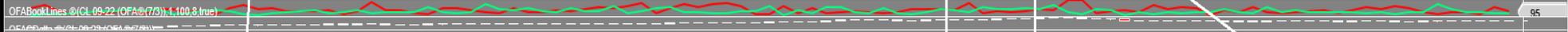
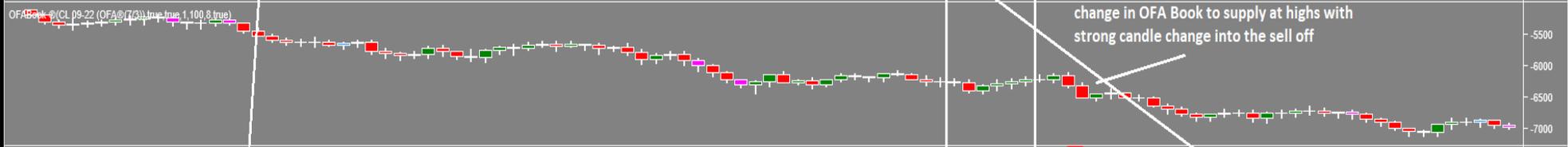
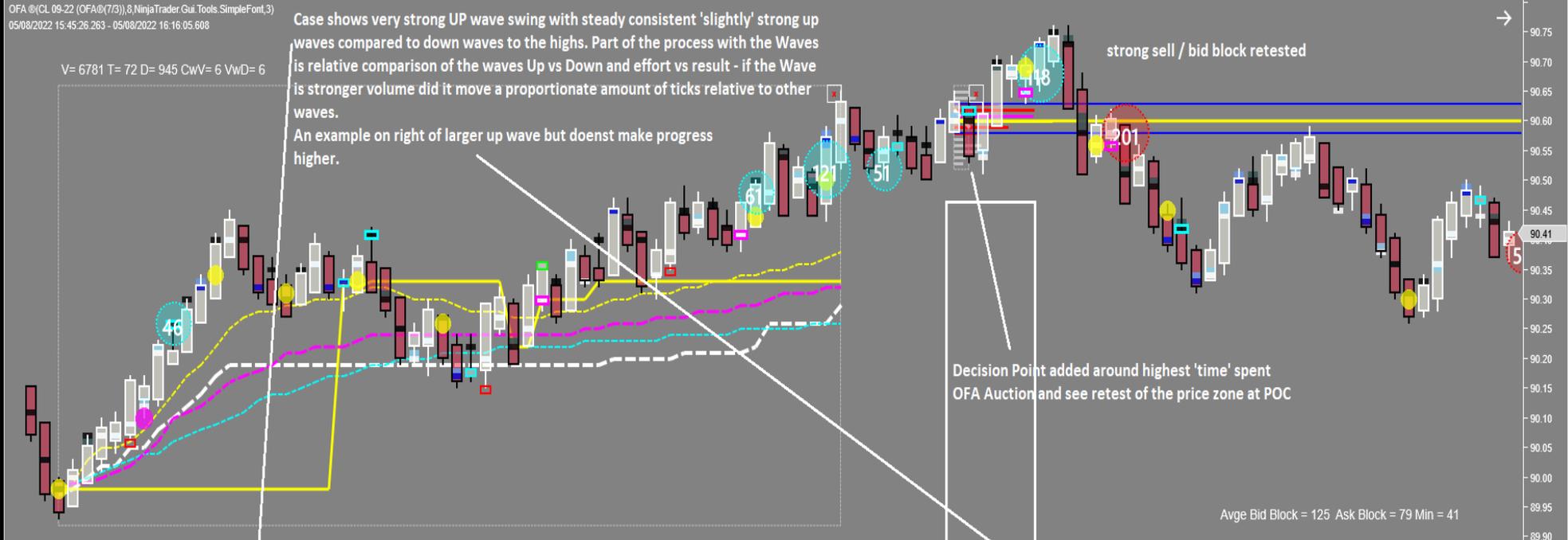


DP(1B) DP(1B A) DP(XB) DP(XB A) RP RP(A) SP SP(A) DP DP(A)

OFA @(CL 09-22 (OFA@(7/3)),8,NinjaTrader.Gui.Tools.SimpleFont,3)
05/08/2022 15:45:26.263 - 05/08/2022 16:16:05.608

V= 6781 T= 72 D= 945 CwV= 6 VwD= 6

Case shows very strong UP wave swing with steady consistent 'slightly' strong up waves compared to down waves to the highs. Part of the process with the Waves is relative comparison of the waves Up vs Down and effort vs result - if the Wave is stronger volume did it move a proportionate amount of ticks relative to other waves.
An example on right of larger up wave but doesn't make progress higher.



Case highlighting declining selling waves into the lows then with a push lower followed by equal wave rejecting lows. Decision Point added to zone with highest 'time' followed by break above this and a swing profile added. Speed markers and blocks included highlight some features of other addons

break above the decision point added to Highest 'time' bar cluster

Swing applied and more follow through Speed markers level 3 (magenta) and level 2 (yellow) - continued up wave volumes dominating.

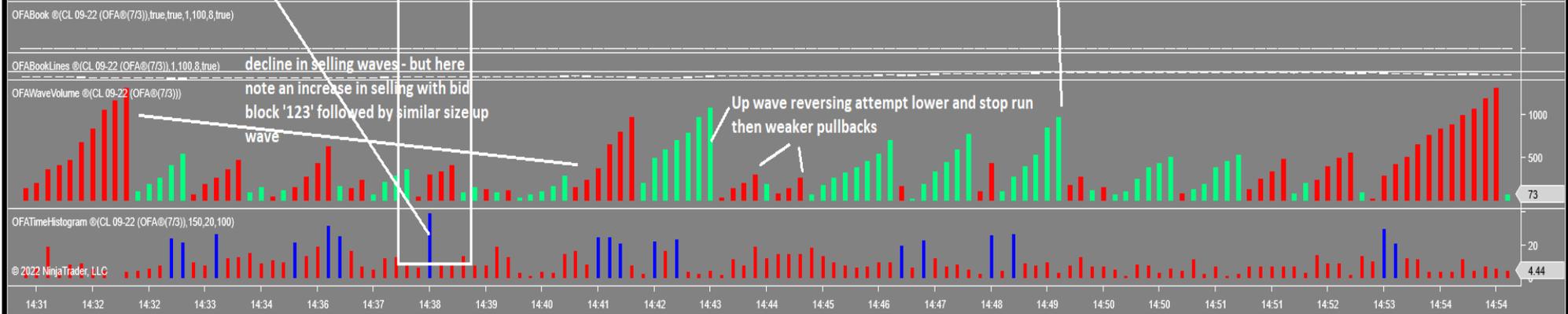
Decision point profile over highest 'time' auction

series of yellow level 2 speed markers with no follow through down and rejection of lower prices. Level 1 (cyan) has been switched off.

Avg Bid Block = 64 Ask Block = 49 Min = 29

decline in selling waves - but here note an increase in selling with bid block '123' followed by similar size up wave

Up wave reversing attempt lower and stop run then weaker pullbacks



OFA ©(CL 09-22 (OFA@(7/3)), 8.NinjaTrader.Gui.Tools.SimpleFont,3)
01/08/2022 16:01:45.233 - 01/08/2022 16:24:27.624

V= 6661 T= 120 D= 79 CwV= 17 VwD= 7

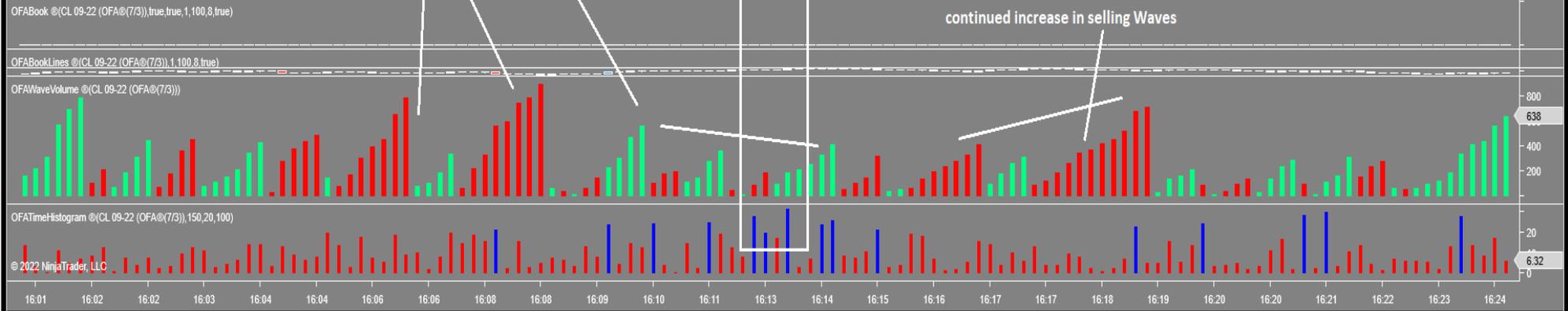
Case showing clear strong down (selling) waves with weaker volume pullback Up waves. Decision Point added to zone of highest 'time' Auctions. Observe follow through of level 2 (yellow) and level 3 (magenta) speed markers. Swing profile added with several opportunities at evolving 50 pullback

Strong selling waves - with weaker and waning up wave pullbacks

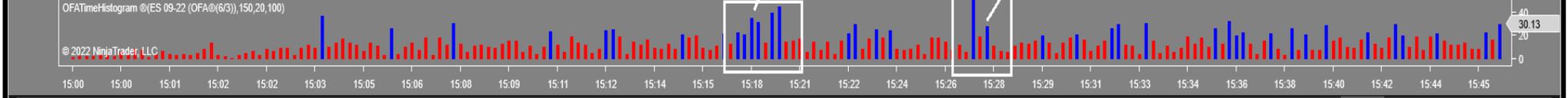
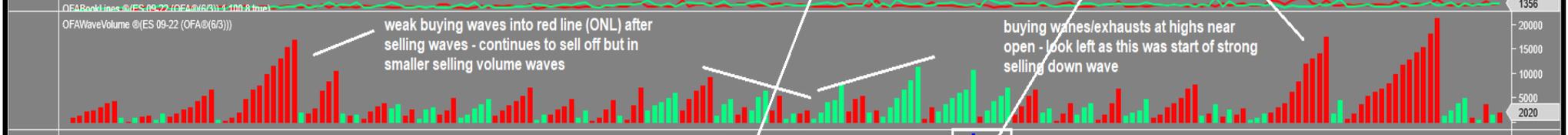
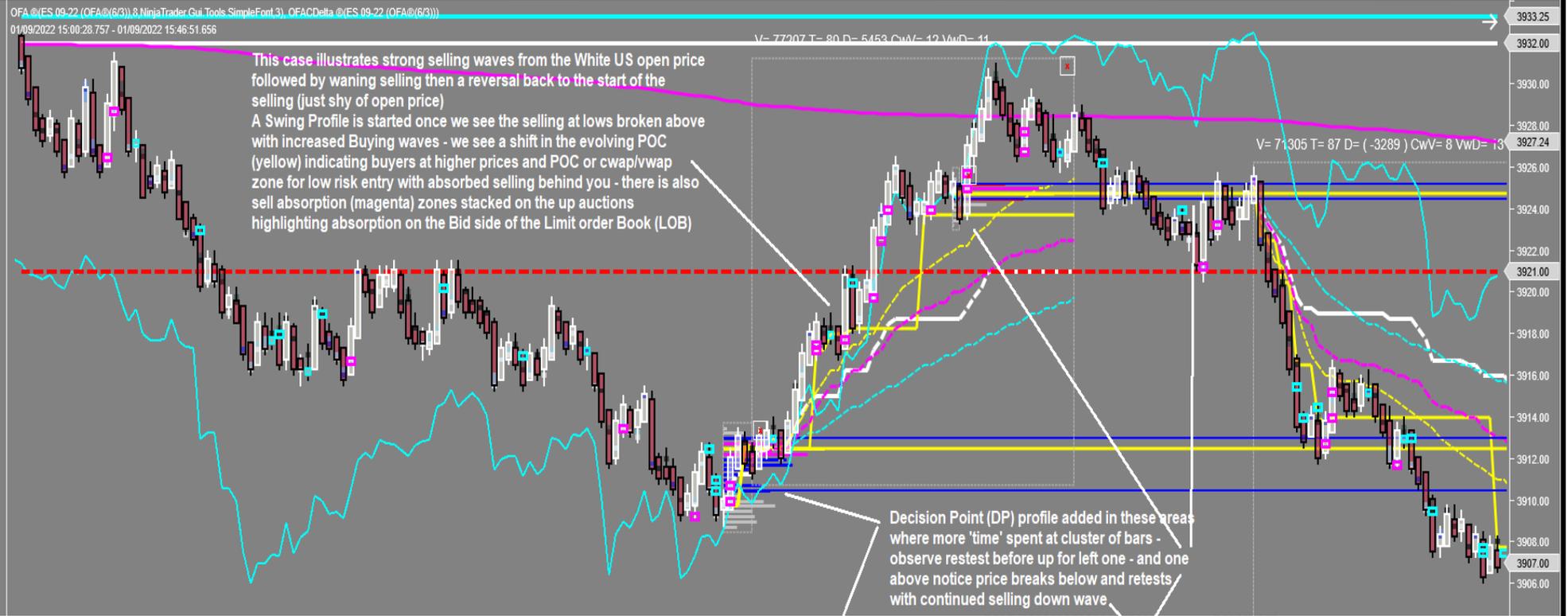
Highest 'time' auctions and decision point added - not breakdown and retest

continued increase in selling Waves

Avg Bid Block = 55 Ask Block = 48 Mh = 29



DP(1B) DP(1B A) DP(XB) DP(XB A) RP RP(A) SP SP(A) DP DP(A)



FAQ Section

How do I install this Addon?

This Addon is part of the main build that is installed with the Installer process outlined in the download page; so there is nothing to import or install. Just make sure you download the Latest OFA release from the download page as this has been updated for this Launch. Once authorised if you have 2 or more of the new OFA Addons (OFA Book / OFA Absorption / OFA Block & Speed) in a bundle you will see the Indicators in the Ninja Indicator Panel **OFAWaveVolume** ® and **OFATimeHistogram** ® & be authorised to use them (ie data will load).

Do I need Level 2 data subscription for any features of this Addon – no only Level 1 data is required – the OFA Book Addon is the one that requires Level 2 data.

I see the OFAWaveVolume ® and OFATimeHistogram ® indicators but no data is showing – check that you have a bundle of 2 or more of the OFA Book / OFA Absorption SRA / OFA Block & Speed. If you do then send ticket to support and we will check the authorisation.