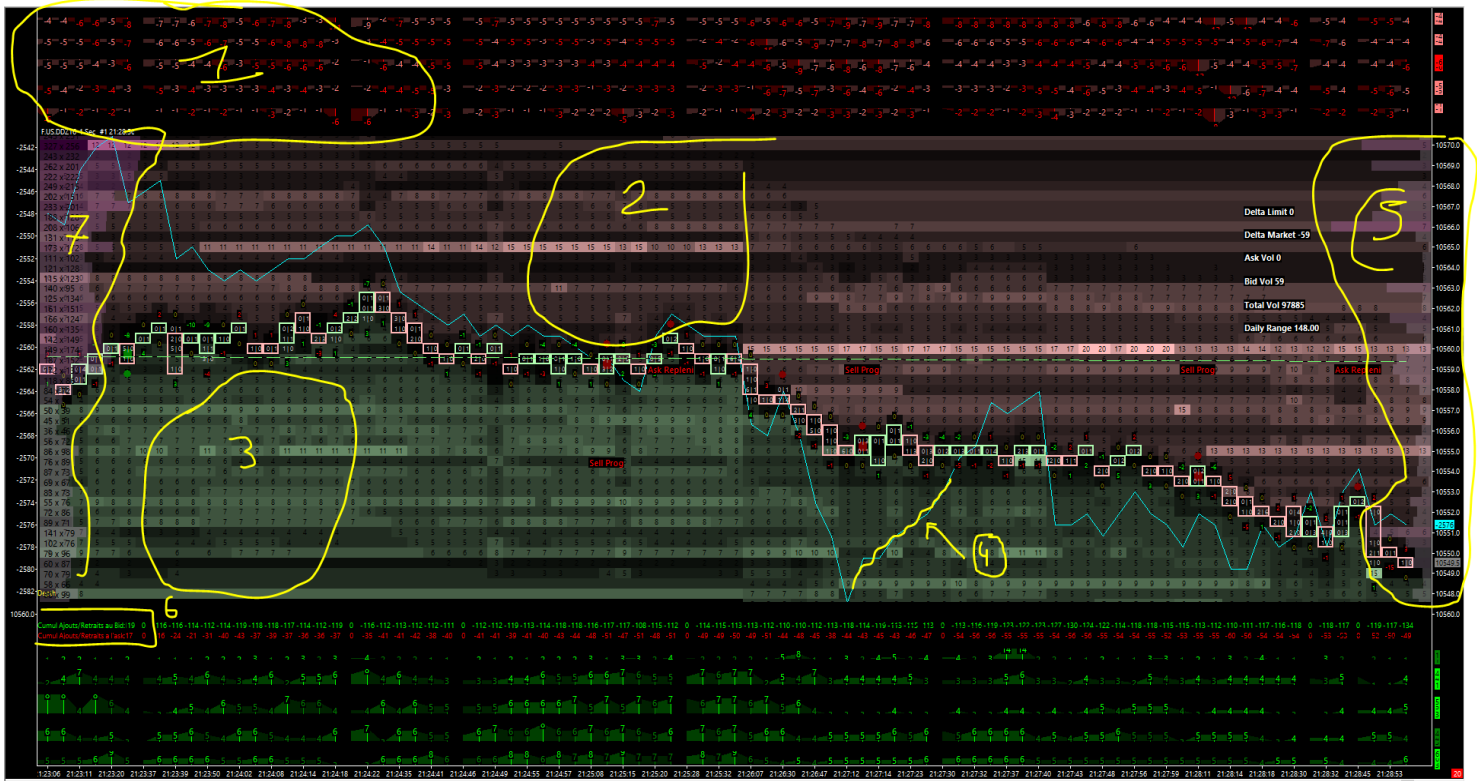


Description of main advanced features and add-ons for the QuantBook

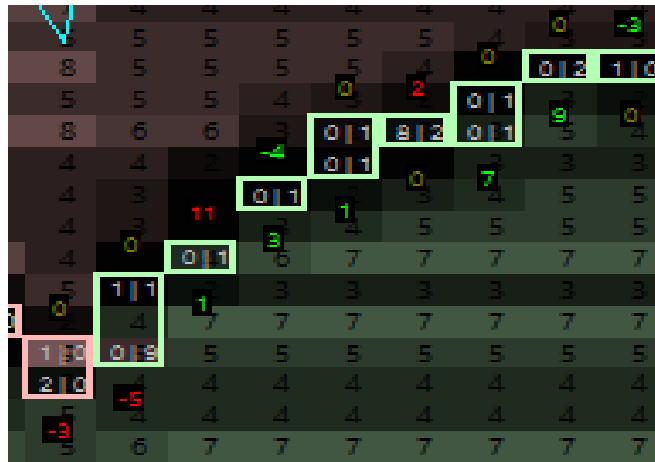
1) General elements :



- 1) It's the 5 best ask level of the orderbook. Shown level by level, for each price ; the five best price offered on the orderbook with each quantities and bar for each print of the book.
- 2) It's the Ask side of the HeatMap, showing all the limit order available at the ask side of the orderbook.
- 3) It's the Bid side of the HeatMap, showing all the limit order available at the bid side of the orderbook.
- 4) It's the inventory line : cyan inventory line ; this line is showing to you the cumulative delta value for the volume (Ask Volume – Bid volume).
- 5) It's the delta volume profil ; showing the cumulative delta volume for each price, and cumulated since the start of the session day.
- 6) It's the cumulative value for all added/removed order, one for the bid side, and the other for the ask side. When the value is positive, it means that there are more orders added, than order pulled. When it's negative value, it means that there are more orders removed compared to the order added. These 2 value are subgraphable into the QuantMap if needed.
- 7) It's the volume profil : typical volume profil with bid and ask quantity printed for each price level, and cumulated. Vpoc are in pink. Gray pink is big volume and clear pink is low volume.
- 8) It's the 5 best bid level of the orderbook. It's showed level by level for each price.

2) Detailed read :

1) the numbers above/below each price bar :



→ These numbers are showing to you if there are more/less added/removed order for each side of the book, at the ask side (at the top of the price bar), and at the bid side (at the bottom of the price bar)

→ If there are more orders added than pulled on the ask side, so the value at the top of the bar will be negativ.

→ If the value at the top of the bar is negativ, it would be colored in green color, because, this withdrawal orders could make the price going higher.

→ If there are more order pulled than added on the ask side, so the value at the top of the bar will be positiv.

→ If the value at the top of the bar is positiv, it would be colored in red color, because this add of orders could make the price going lower.

→ If there are more pulled order than added order at the bid side, so the value at the bottom of the bar will be negativ.

→ If the value at the bottom of the bar is negativ, it would colored in red color, because this withdrawal orders could make the price going lower.

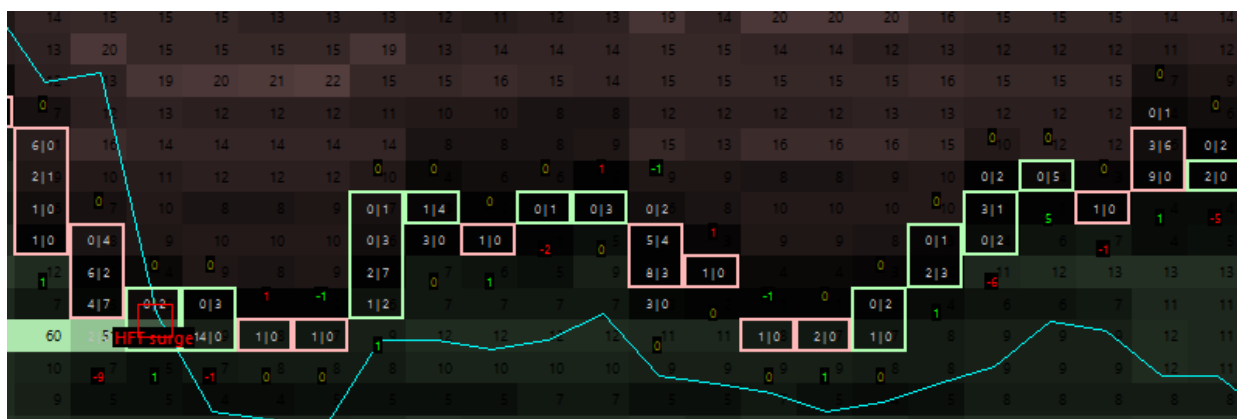
→ If there are more added order than pulled order at the bid side, so the value at the bottom of the bar will be positiv.

→ If the value at the bottom of the bar is positiv, it would colored in green color, because this add of orders could make the price going higher.

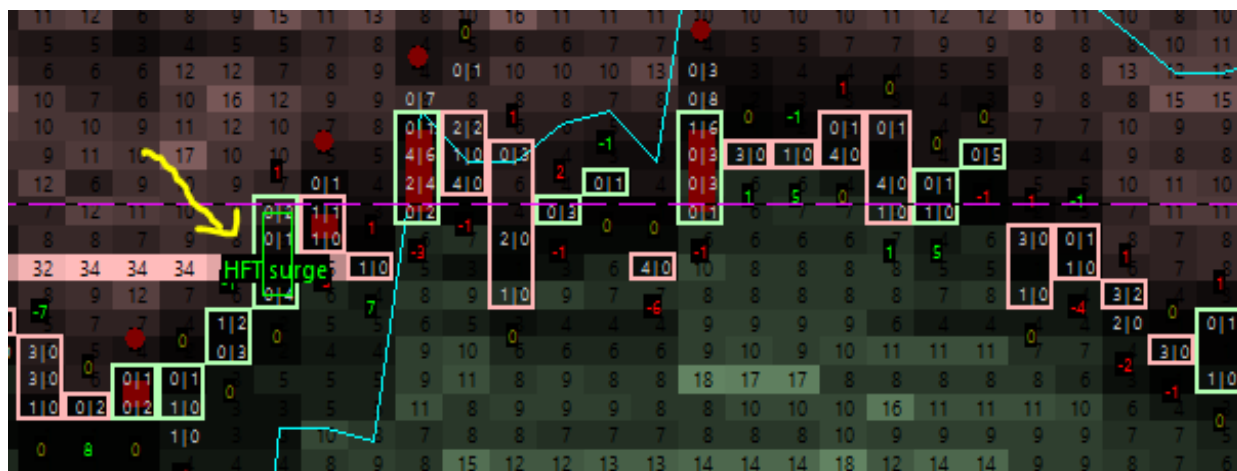
→ When the two value (at the bottom/top of the bar) are green, it means it's a bullish bar.

→ When the two value (at the bottom/top of the bar) are red, it means it's bearish bar.

2) The Text Label Alerts :



→ **HFT Surge** : Important volume (market orders) filled at a very fast speed. This kind of volume are often trapped and have sold the low. You can modify the quantity size you want to trigger it in the studies setting if you need it for an other asset.



→ **HFT Surge** : Important volume (market orders) filled at a very fast speed. This kind of volume are often trapped and have bought the high. You can modify the quantity size you want to trigger it in the studies setting if you need it for an other asset.

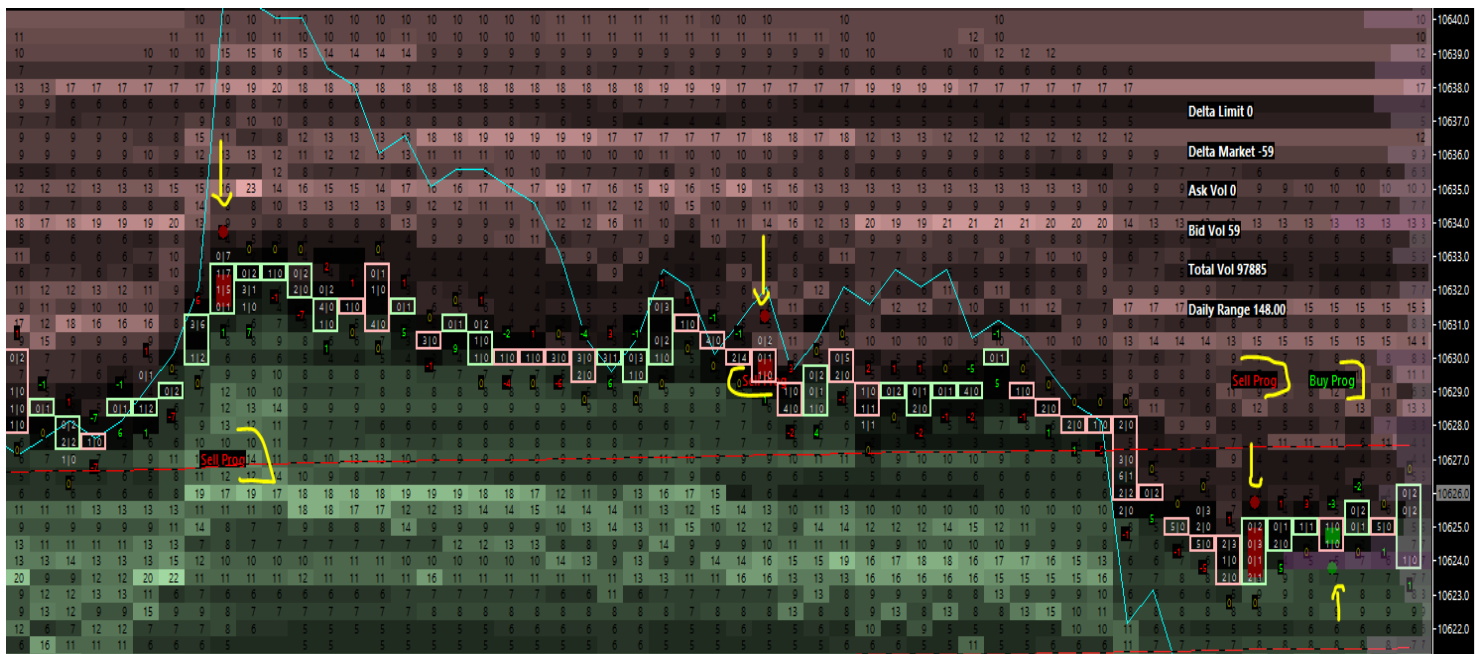
→ **Please notice :**

If this HFT Surge is triggered in a small price bar, it could be interesting to fade it (sell an HFT buy surge, or buy an HFT sell surge)

But if this HFT Surge is triggered in a large price bar (with a high range), it could be the beginning of the price movement (with market making fly), so warning for fade ! (it could be the start of up moove for HFT buy surge, or the start of down moove for HFT sell surge)

Therefore, about in 70% of case, HFT Surge are fadable, and fightable, because these kind of market volume are usually trapped at the top/bottom.

→ Buy Programm and Sell Programm :



→ Buy and Sell programm are showing to you how the volume (market order) are executed by the price : compared to the price.

Indeed, according to the economic theory, and market auction theory, an ask volume (bought market order) have to push the price higher, or not moove it. And a bid volume (sold market order) have to push the price lower, or not moove it.

Also, in typical down price moovment, you could find many downtick volume, and more downtick volume than uptick volume. And in a up price moovment, you could find many uptick volume, and more uptick volume than down tick volume.

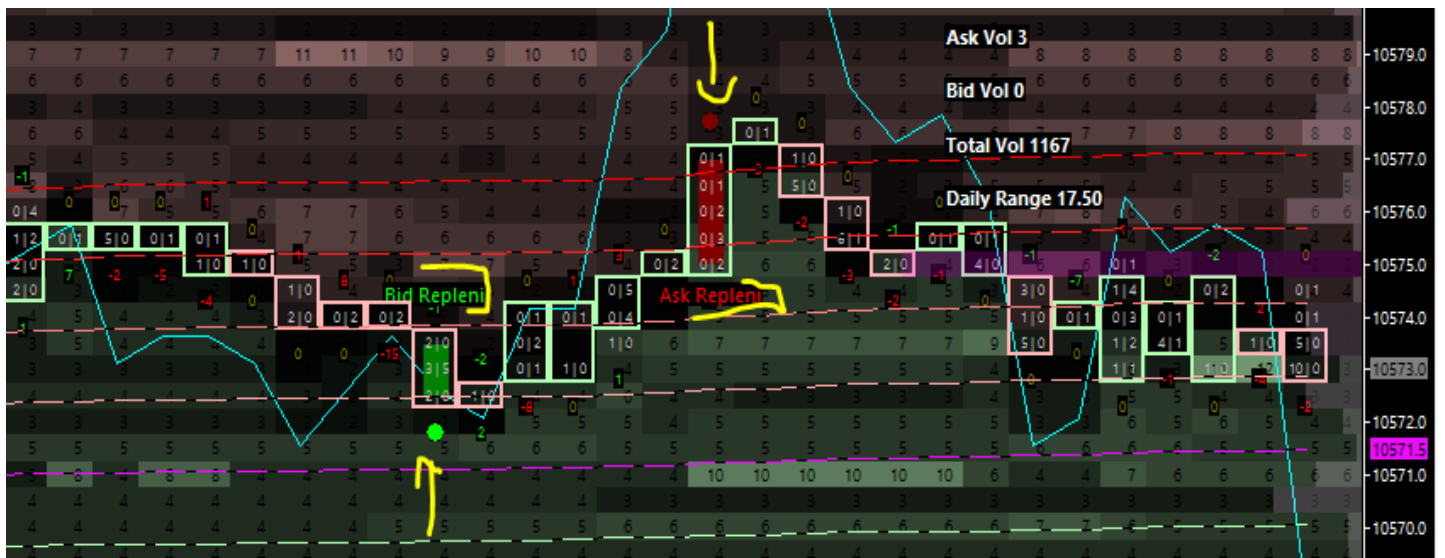
Remember that : $\text{Ask Volume} + \text{Bid Volume} = \text{Total Volume} = \text{Uptick Volume} + \text{DownTick Volume}$

Sometimes, we could notice that we get more uptick volume than downtick volume, but with more bid volume (sold contract) than ask volume (bought contract) and with a price which is going down ! At the contrary, sometimes, we could notice that we will get more downtick volume than uptick volume, but with more ask volume (bought contract) than bid volume (sold contract) and with a price which is going up ! It's not a normal, and standard situation ! It's illustrating how the market is rigged by HFT algo

→ Notice that an uptick volume could be a bought contract or a sold contract ; as a downtick volume could be a sold contract or a bought contract. It's just market contract.

For example you will get some bought contract executed as downtick volume at the top of the price... as a tomatoes seller will say to you : « no problem dude, now it's not 2 euros the kilogramm, it's only 1 euros, especially for you, come on, come on ! » It seems to be a better price for buying... yes, but, in fact, it's the top of the day, and this buyer is buying the top of the price. The most expensive price.

→ Bid/Ask replenished Alert :



→ **Bullish signal = Bid replenished :** It means that there are some orders added at the bid side of the orderbook, and some orders removed from the ask side of the orderbook. This bullish signal « Bid replenished » will be triggered only when the price is going down. It means that there are limit order operator who are fighting the tape, by changing their depth structure.

→ **Bearish signal = Ask replenished :** It means that there are some orders added at the ask side of the orderbook, and some orders removed from the bid side of the orderbook. This bearish signal « Ask replenished » will be triggered only when the price is going up. It means that there are limit order operator who are fighting the tape, by changing their depth structure.

