# QuantMap v7 – Bid/Ask Replenished Alert & Iceberg Detector

For studying the Bid/Ask replenished Alert, and the Iceberg detector, we will take an example on the FDAX contract, during the pre opening UE session.



As you can see, for each bar of the QuantMap, there are two numerical values at the top, and the bottom of each bar.

These numerical values are showing the replenishing/pulling order process for each price of the orderbook, compared to the volume executed.

When there are ask limit order which are added to the ask depth, more than the bought volume executed at the price level, the value at the top will be colored in red, and will be a positiv value.

When there are ask limit order which are pulled from the ask depth, more that the bought volume executed at the price level, the value at the top will be colored in green and will be a negativ value.

When there are bid limit order which are added to the bid depth, more than the sold volume executed at the price level, the value at the bottom will be colored in green, and will be a positiv value.

When there are bid limit order which are pulled from the bid depth, more than the sold volume executed at the price level, the value at the bottom will be colored in red, and will be a negativ value.

When these two values are positiv, it means that some liquidity is added to the ask side, and to the bid side. When these two value are negativ, it means that some liquidity is removed to ask side, and to the bid side.

Also, as you can see on the QuantMap of the FDAX in page 1, for each bar you will get a key data by these calculated value.

The goal for a trader, or a scalper, will be to see the all order that have been added or pulled from the orderbook, and according to the volume executed.

The most interesting configuration is when you can see a withdrawal of liquidity in one side, and an add of liquidity in the other side ; because this kind of setup are creating a huge imbalance in the depth structure.

And this huge imbalance in the depth structure will be the begginning of a change in the market order flow (volume).
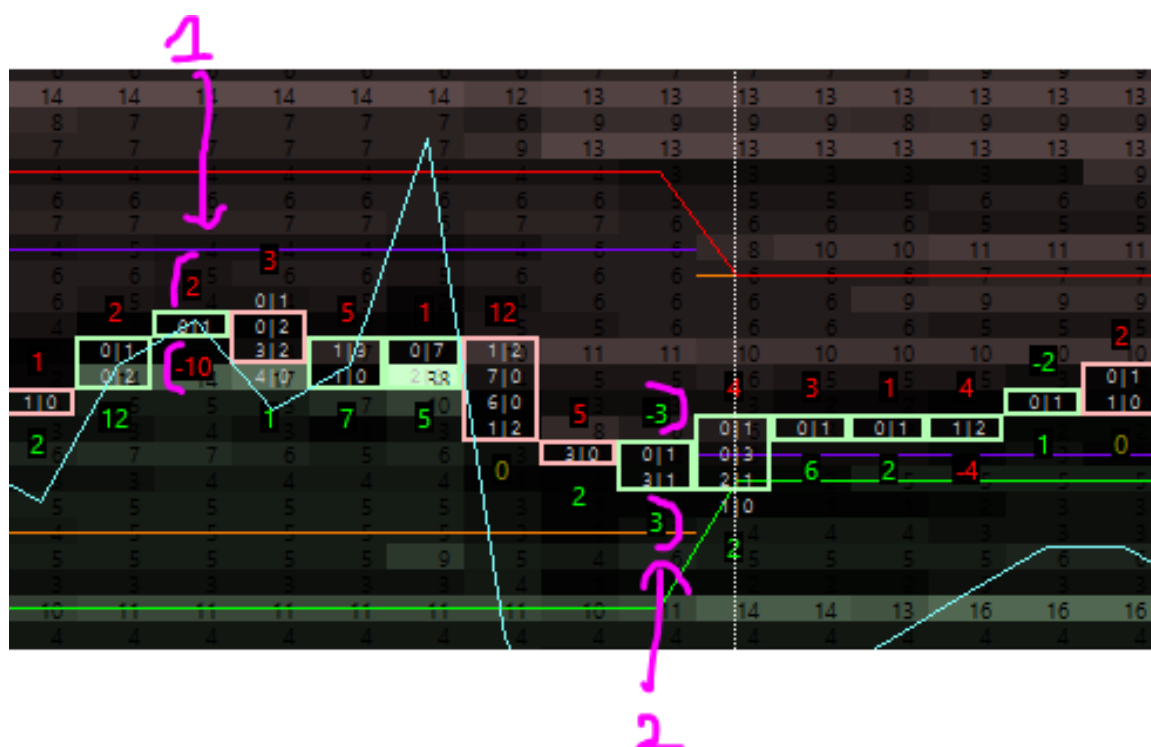


When you could see this kind of setup, for example, in the third bar of the screen :

→ +2 / - 10 in red color : it means that there are 2 ask limit order which are added in addition of the last best ask depth ; and 10 bid limit orders are pulled from the bid depth (at the same time), compared to the last best bid depth.

→ more over, when you could notice that these adding/withdrawal order process is coming with an uptick ; it's a good bearish signal. (divergence between « price action » and « adding/withdrawal order process »)

As you can see, when you have a withdrawal in one side, and an add on the other side, it's very important to watch it, because it will show to you that somebody wants to take the control of the price auction, and the price action.

Finnally, when you will detect a withdrawal of liquidity, and an add of liquidity on the other side, with the price action who is going at the opposite side of the imbalance depth structure, you will see that an alert will be triggered, with a text label on it.

→ **Ask replenished alert** = when liquidity is added to the best ask depth + liquidity is removed from the best bid depth + price is going up = **bearish signal** (example 1 on the 2nd screen)

→ **Bid replenished alert** = when liquidity is added to the best bid depth + liquidity is removed from the best ask depth + price is going down = **bullish signal** (example 2 on the 2nd screen)
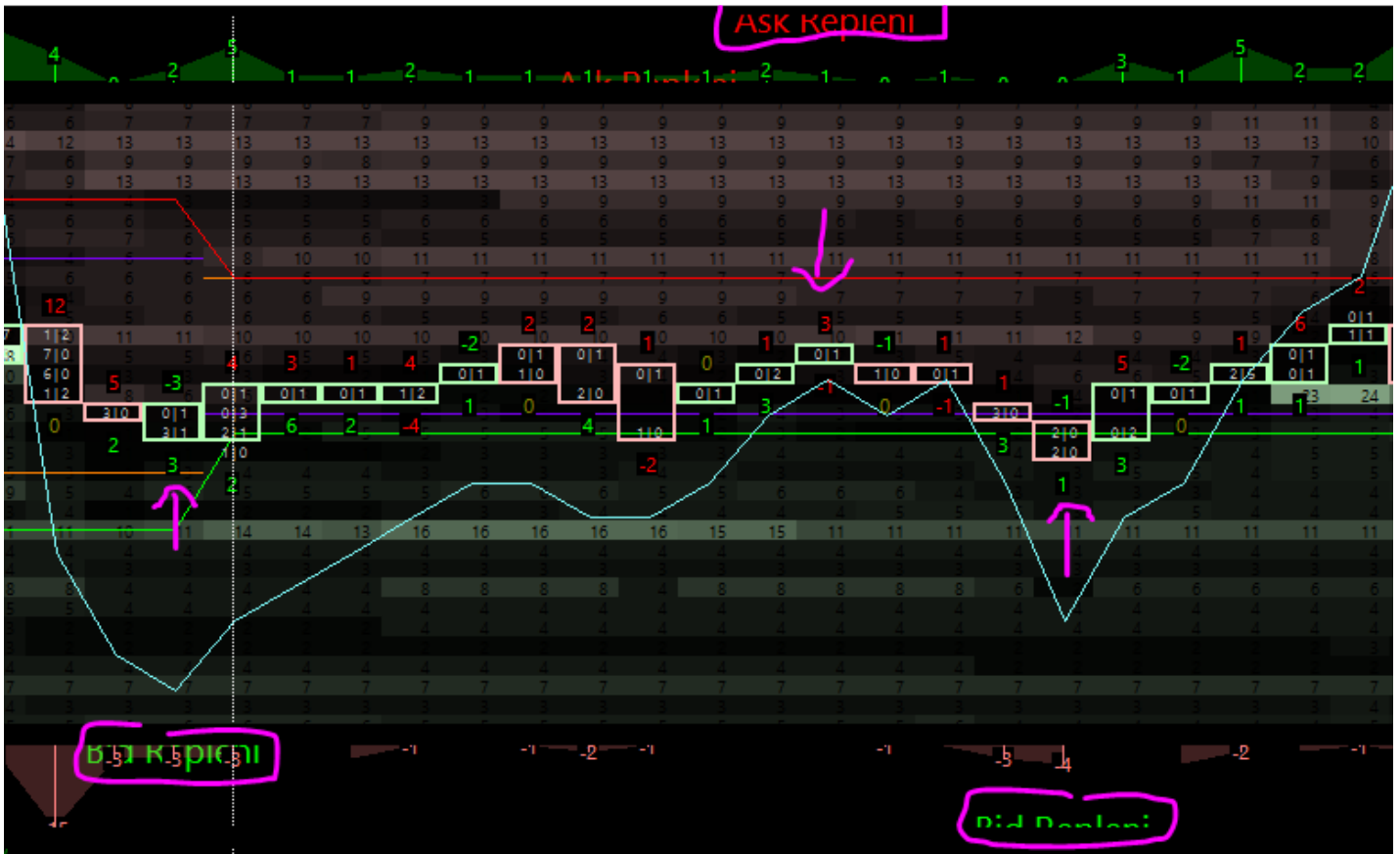


**The formulas for calculating this numerical value is :**

→ number at the top of the bar = (best last ask depth – last ask volume) – new best ask depth = (theorical new best ask depth ) - (new best ask depth)

→ number at the bottom of the bar = (best last bid depth – last bid volume) – new best bid depth = (theorical new best bid depth) – (new best bid depth)

The goal of this calculation is to identify the hidden add/remove order process, according to the volume executed.

When there is 2 « replenished/removed order process » which are coming on the same side, and in a row way, it will be a better signal, and the iceberg detector will triggered if all of these condition are reached.

## 2) Key example on the FDAX contract :
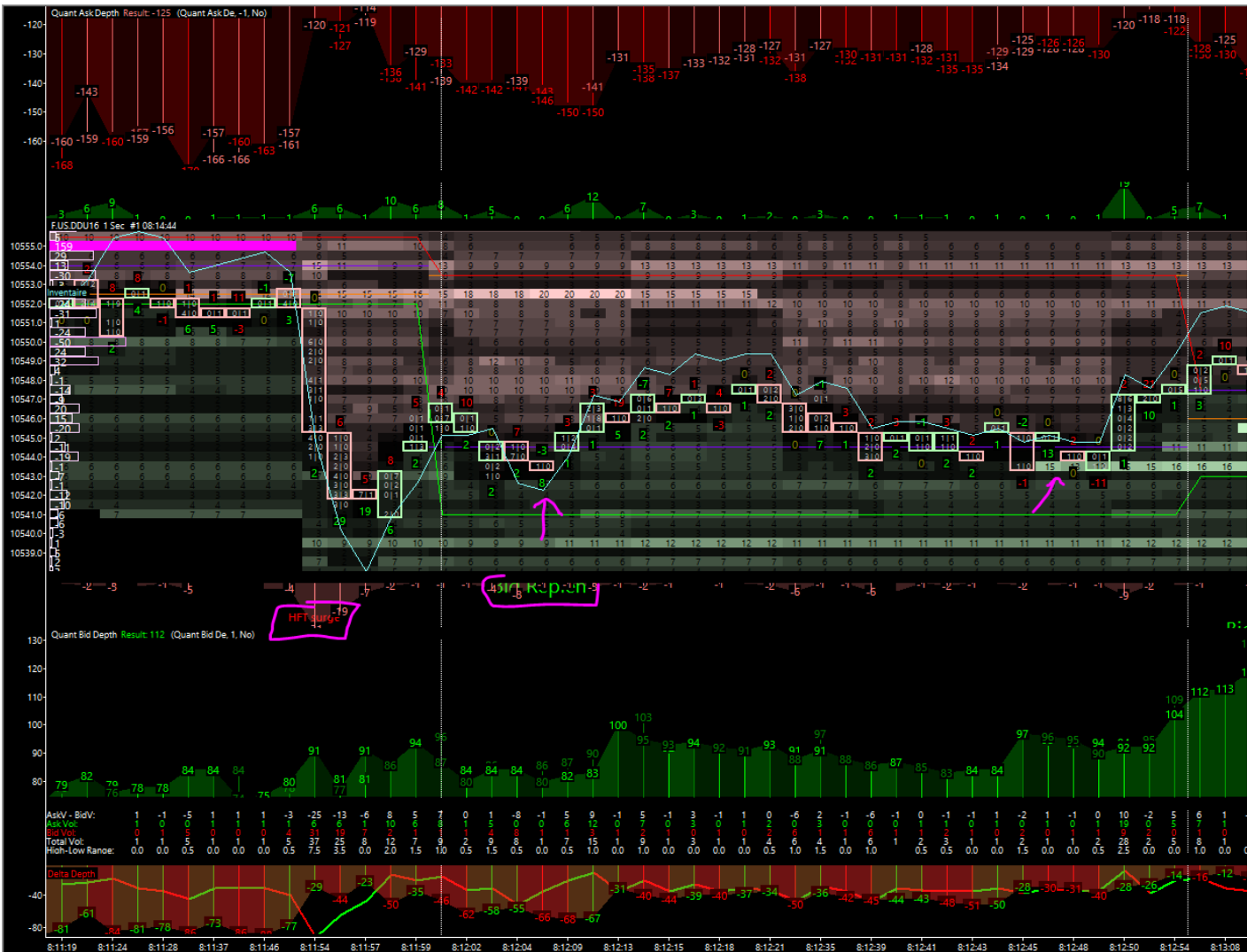


On this example, we can notice few element which will invite the trader for detecting a bullish signal :

→ price is extending his daily range
→ price is going down
→ sold market volume potentially locked at the bottom
→ volatility increase
→ HFT sell surge (mean high speed takers algorithm are executed in huge amount and in a very small execution delay.
→ probably a stop running setup under the low of the day
→ W bottom pattern on the price action (for forcing the last buyer to exit their position)
→ Bid replenished on the 2nd leg of the W bottom
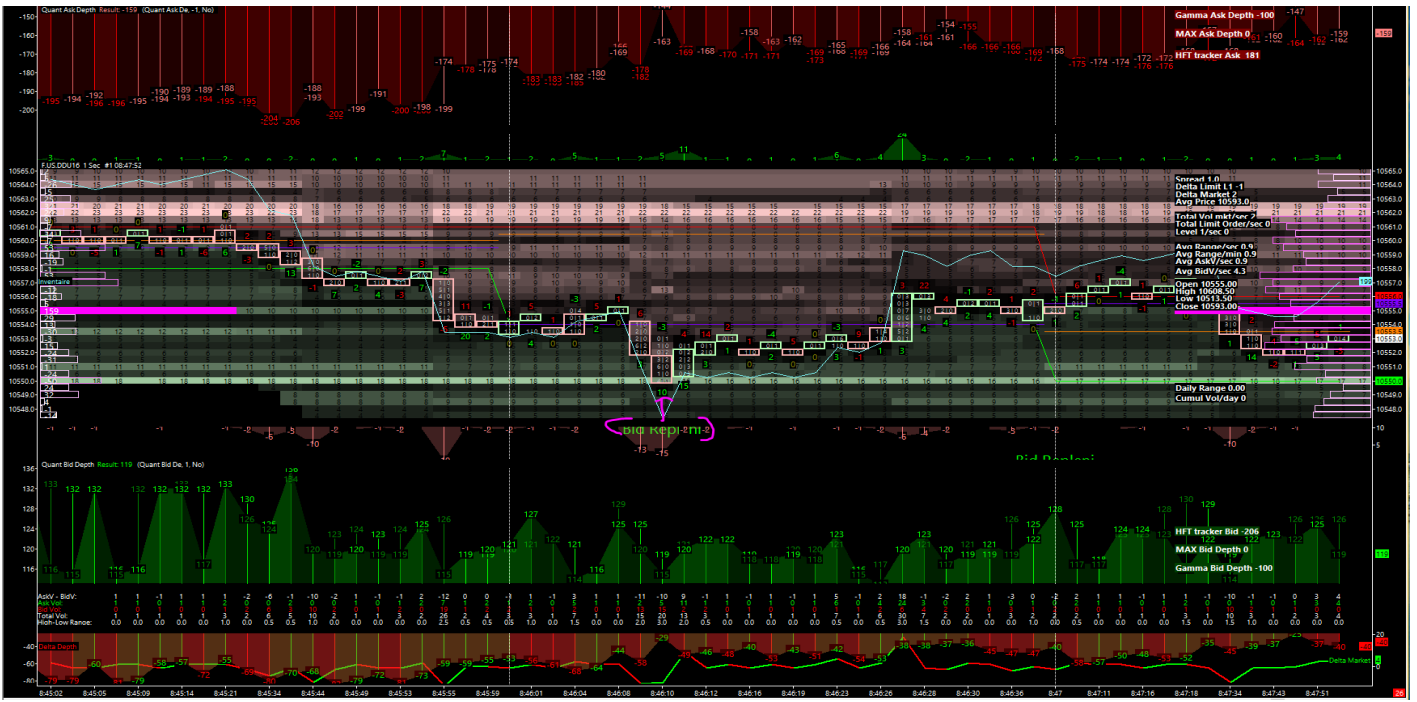
Same configuration on an orderbook key price level highlited in light green on the heat map. We could notice that this key price level is matching with a valley of volume profil too.