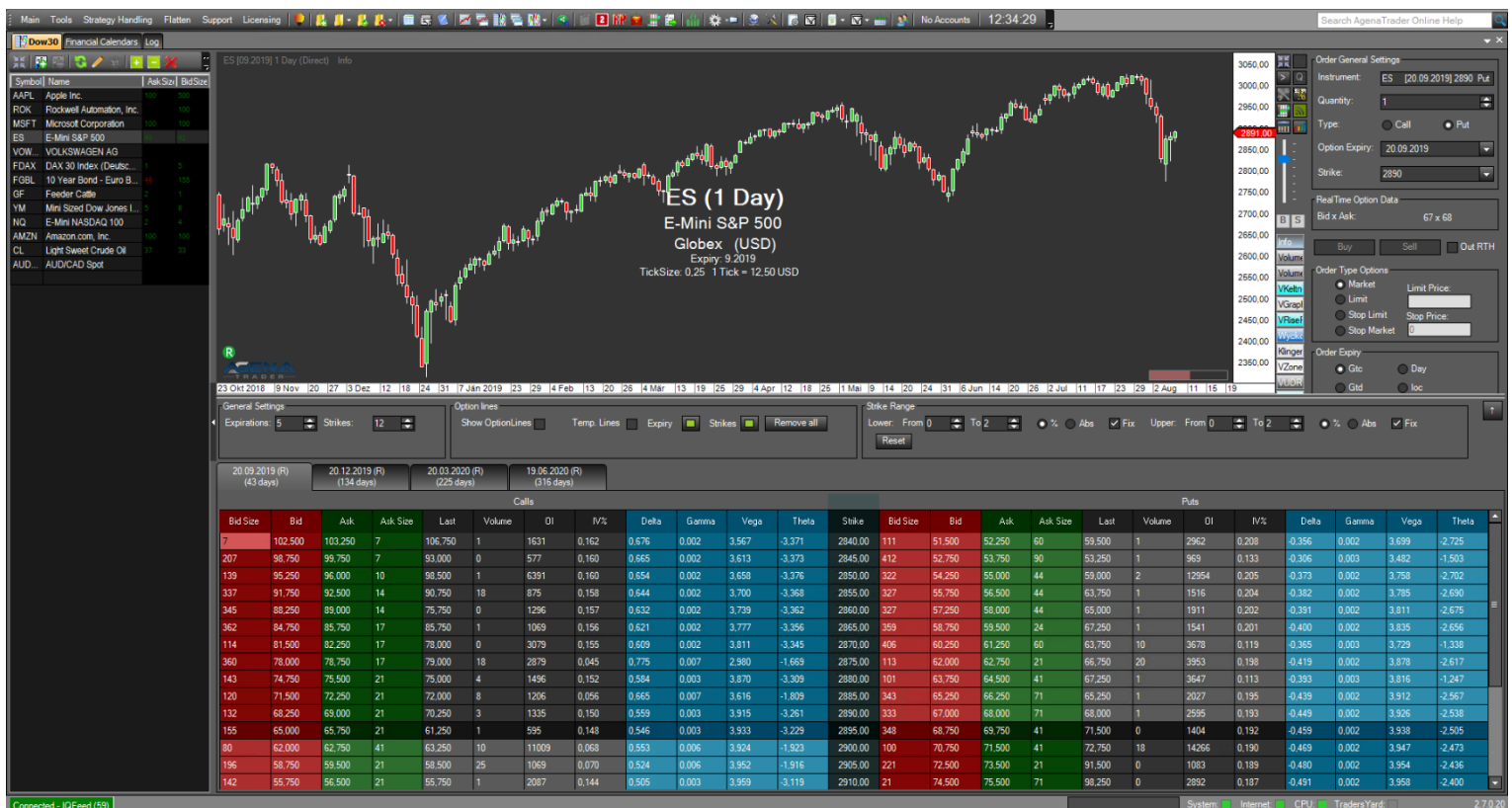




# AGENA TRADER

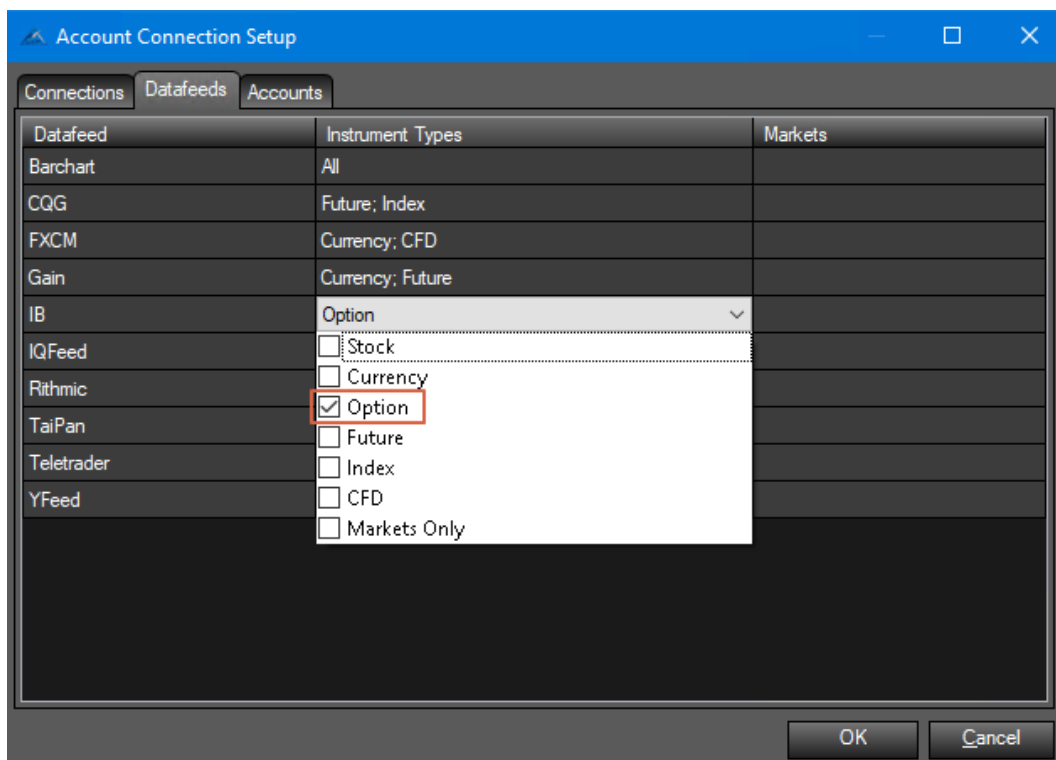
## OPTIONSTRADING BASIC

With the AgenaTrader V2.7.0 it is now possible to trade options directly out of your AgenaTrader. Clear option chains for each instrument directly under your charts or as a separate window make it possible to keep track of the latest option data at all times and to find the optimal option for your own trading. The option selected in the OptionChain is synchronized directly with the new OptionTradingPad, which can be used to buy or sell the option with a single further click. In addition, there is the possibility to trade options directly from a chart (Option-ChartTrading) using the right-click menu - a particularly convenient solution for trading options. The current option trades are displayed directly in the chart of the underlying. With new indicators that can display greeks and other options data, it is possible to graphically analyze these data series and also incorporate them into automatic scans and signals with the ConditionEscort. Our aim is to offer the best possible software and the most advanced tools for option traders.



## 1. DATAFEED & BROKER SETTINGS

To enable your broker and datafeed in AgenaTrader to receive options-data / trade options, you need to enable the „Option“ Instrument Type in the account-connection setup window for the accounts you want to use.



### a. Datafeeds

The feed for which you activate the „Option“ Instrument Type will serve as the data source for the OptionChain and the option-indicators. You can also use the Multi-Feed possibility of AgenaTrader to use one datafeed only for Options, and another datafeed for the underlying.

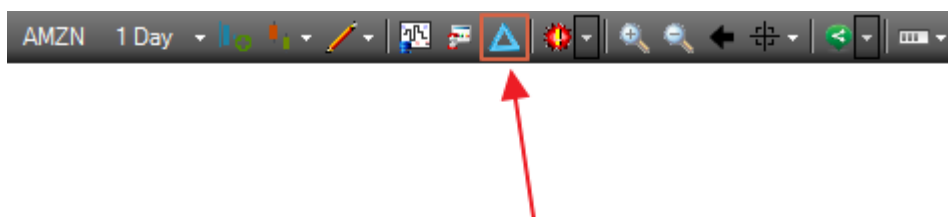
- InteractiveBrokers
  - Additional subscription to OPRA-data necessary
- IQ Feed
  - Additional subscription to OPRA-data necessary
- Rithmic (release in Autumn 2019)
- CQG (release in Autumns 2019)

### b. Broker / Technology providers

- InteractiveBrokers
- Rithmic (release in Autumn 2019)
- CQG (release in Autumns 2019)

## 2. OPTIONCHAIN

You can open the option chain from the chart-toolbar with this symbol:



This symbol refers to an uppercase greek delta letter, which therefore associates to the greeks shown and calculated in the OptionChain. If you are connected to a datafeed which is able to receive option-data for the underlying you have opened in your chart, the OptionChain will load and data will appear in the table.

General Settings		Option Lines										Strike Range												
Expirations: 5	Strikes: 12	Show Option Lines	Temp. Lines	Expiry	Strikes	Remove all	Lower: From 0	To 2	%: Abs	Fix	Upper: From 0	To 2	%: Abs	Fix										
Calls																								
Bid Size	Bid	Ask	Ask Size	Last	Volume	OI	I/V%	Delta	Gamma	Vega	Theta	Strike	Bid Size	Bid	Ask	Ask Size	Last	Volume	OI	I/V%	Delta	Gamma	Vega	Theta
102,500	103,250	7	106,750	1	1631	0.162	0.676	0.002	3.567	-3.771	2840.00	111	51,500	52,250	60	58,500	1	2862	0.208	-0.356	0.002	3.690	-2.728	2,728
207	98,750	99,750	7	93,000	0	577	0.160	0.665	0.002	3.613	-3.773	2845.00	412	52,750	53,750	30	53,250	1	969	0.133	-0.305	0.003	3.482	-1.500
139	95,250	96,000	10	98,500	1	6391	0.160	0.664	0.002	3.658	-3.776	2850.00	322	54,250	55,000	44	59,000	2	12564	0.205	-0.373	0.002	3.758	-2.762
337	91,750	92,500	14	90,750	18	876	0.158	0.644	0.002	3.700	-3.368	2855.00	327	55,750	56,500	44	63,750	1	1516	0.204	-0.382	0.002	3.788	-2.690
345	88,250	89,000	14	75,750	0	1296	0.157	0.632	0.002	3.759	-3.362	2860.00	327	57,250	58,000	44	65,000	1	1911	0.202	-0.391	0.002	3.811	-2.675
362	84,750	85,750	17	85,750	1	1068	0.156	0.621	0.002	3.777	-3.356	2865.00	369	58,750	59,500	24	67,250	1	1541	0.201	-0.400	0.002	3.836	-2.656
114	81,500	82,250	17	78,000	0	3079	0.155	0.609	0.002	3.811	-3.345	2870.00	406	60,250	61,250	60	63,750	10	3678	0.119	-0.365	0.003	3.729	-1.338
360	78,000	78,750	17	79,000	18	2879	0.045	0.775	0.007	2.880	-1.669	2875.00	113	62,000	62,750	21	66,750	20	3953	0.188	-0.419	0.002	3.878	-2.617
143	74,750	75,500	21	75,000	4	1496	0.152	0.584	0.003	3.870	-3.309	2880.00	101	63,750	64,500	41	67,250	1	3647	0.113	-0.393	0.003	3.816	-1.247
120	71,500	72,250	21	72,000	8	1206	0.056	0.685	0.007	3.616	-1.809	2885.00	343	65,250	66,250	71	65,250	1	2027	0.195	-0.439	0.002	3.912	-2.567
132	68,250	69,000	21	70,250	3	1335	0.150	0.589	0.003	3.915	-3.261	2890.00	333	67,000	68,000	71	68,000	1	2595	0.193	-0.448	0.002	3.936	-2.538
155	65,000	65,750	21	67,250	1	599	0.148	0.546	0.003	3.933	-3.229	2895.00	348	68,750	69,750	41	71,500	0	1404	0.192	-0.459	0.002	3.959	-2.509
89	62,000	62,750	41	63,250	10	11059	0.058	0.953	0.006	3.924	-1.923	2900.00	100	70,750	71,500	41	72,750	18	14266	0.190	-0.469	0.002	3.949	-2.479
196	59,750	60,500	21	61,500	25	1068	0.070	0.934	0.006	3.952	-1.915	2905.00	221	72,500	73,500	21	81,500	0	1083	0.189	-0.480	0.002	3.954	-2.458
142	56,750	56,500	21	58,750	1	2087	0.144	0.899	0.003	3.959	-3.118	2910.00	21	74,500	75,500	71	86,250	0	2882	0.187	-0.491	0.002	3.958	-2.438

The left side of the chain shows data for Calls, the right side shows Put-information. In the middle column, each available strike price is shown. If you open e.g. the AAPL stock in your chart and then load the OptionChain, automatically the available option expiries (tabs) and available strikes (rows) will be loaded. There is one row which has darker background than the others – this is the at-the-money (ATM) strike, which means it is the strike which is nearest to the current price of the underlying. The rows with lighter background are the in-the-money (ITM) options, while the darker background indicates out-of-the-money (OTM) options.

You also can open a standalone OptionChain with Main → New → OptionChain.

### a. Settings

#### i. General Settings

##### – Expirations

AgenaTrader is automatically detecting the available option expiries for each individual instrument. Each expiry is a single Tab with following information:

- Expiry-Date
- Regular expiry (R) or weekly expiry
- Days remaining until expiry

You can increase the shown expiries (tabs) by changing the number in the Expiration-field. The available expiries are limited regarding how far in the future they are provided.

– Strikes

Here you can select, how many strikes in total should be shown in the OptionChain. The ATM strike is not considered in this count. If you choose a strike count of 10, then 5 strikes above the ATM-strike and 5 strikes below the ATM-strike will be shown. If you increase the number of strikes, a new strike will be added one time above and one time below the ATM-strike alternately.

ii. OptionLines

By activating „Show OptionLines“, each specific option which you click on in the OptionChain from now on will be graphically shown in the underlying chart. In that way, you can easily check visually, how far the strike price would be away from the current market price, as well as how far in the future the expiry will be.



If you activate „Temp. Lines“, only the lines for the latest clicked option are drawn in the chart. With the „Expiry“ and „Strikes“ you can change the color of each new shown option in the chart.

You can use this tool to quickly check, where you want to place your option-orders.

iii. StrikeRanges

With this tool you can add far-away strikes to your strike-list. That is particularly useful if you for example want to write calls or puts e.g. 10% above/below the current market price. In that case you can set the lower range to 10-12%, thus all strikes which are 10-12% below from the current market price will be added to your OptionChain, vice versa for the upper range.

You can select if you put the values in „%" (values between 0 and 100 allowed) or in absolute numbers „Abs". With the „Abs" setting, you e.g. can put the lower range to 110-130 for AAPL options, consequently all strikes with are between these pricec this range will be added to your OptionChain.

Activating the „Fix" checkbox means, the borders you are set for the ranges will not be included in the selection. If we take the example from above with lower absolute range 110-130, then strikes of 110 and 130 will not be included in the list. If you deactivate the „Fix" checkbox, the OptionChain will add the border-values to the selection. If there are no strikes for the border-values, the next available strike will be added to the list, even if it is slightly out of the range. In that way, you can avoid that you slightly miss a strike if your selection is too strict.

#### iv. Choose Columns

If you right-click in the header of the OptionChain columns, the right-click menu opens and you can select „Choose Columns". In the following window you can select and deselect which columns you want to see in your option chain.

#### v. Move Columns

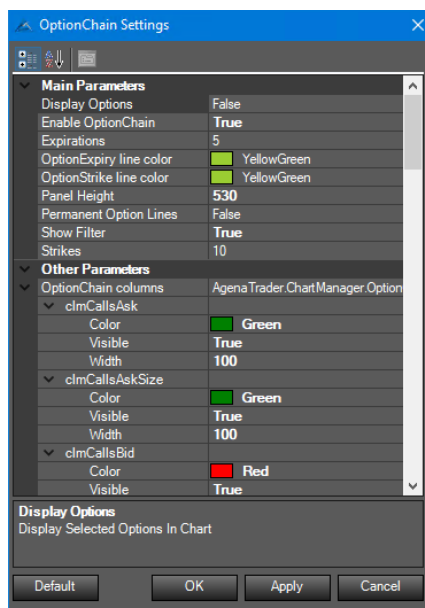
You can easily change the order of the columns in your OptionChain, by left-clicking the header of a row and drag&drop it to the position where you want it to be.

#### vi. Color Settings

By opening the Color-menu in the chart-toolbar, you will find a new button „Option Chain setting" – click on it for the detailed configuration of the graphics of your OptionChain.



The most important settings here are the colors for each column – e.g. the property „clmCallsAsk" represents the ask-column on the call-side. You easily can change the background color of each single column here in the settings. If you want to set the coloring back to default values, just press the „Default" button in the lower left corner of this window.

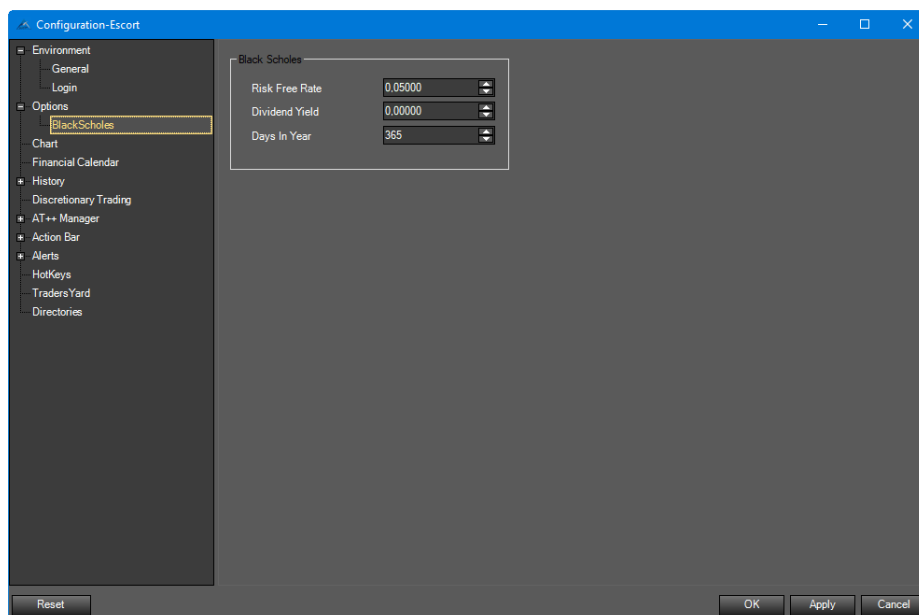


## b. Available columns

- i. Bid/Ask
- ii. BidSize/AskSize
- iii. Last price
- iv. Option Volume
- v. Option OpenInterest (OI)
- vi. ImpliedVolatility (IV%)
- vii. Greeks
  - Delta
  - Gamma
  - Theta
  - Vega

(Information about the greeks can be found here: [LINK](#))

**IMPORTANT:** InteractiveBrokers is calculating the greeks inside the TWS and sending the values directly to AgenaTrader. IQ-Feed does not provide greek-values directly, so we need to calculate the greeks based on the BlackScholes formula inside AgenaTrader. BlackScholes calculations are quite complex and dependent on many input factors. For that reason, there are new settings in the ConfigurationEscort, where you can set the basic input parameters which AgenaTrader should use for the greeks-calculations for IQ-Feed. If you do not have deep knowledge about the BlackScholes formula, we recommend that you do not change the values provided by default. The values calculated by BlackScholes formula also have some estimations in it, as BlackScholes is basically calculating greeks for european style options, while today most options are american style options. Greeks are a complex topic, and you most probably will get different results for greeks and implied volatility for each single source you check. Anyway, we try to calculate the greeks in the most efficient and best possible way.

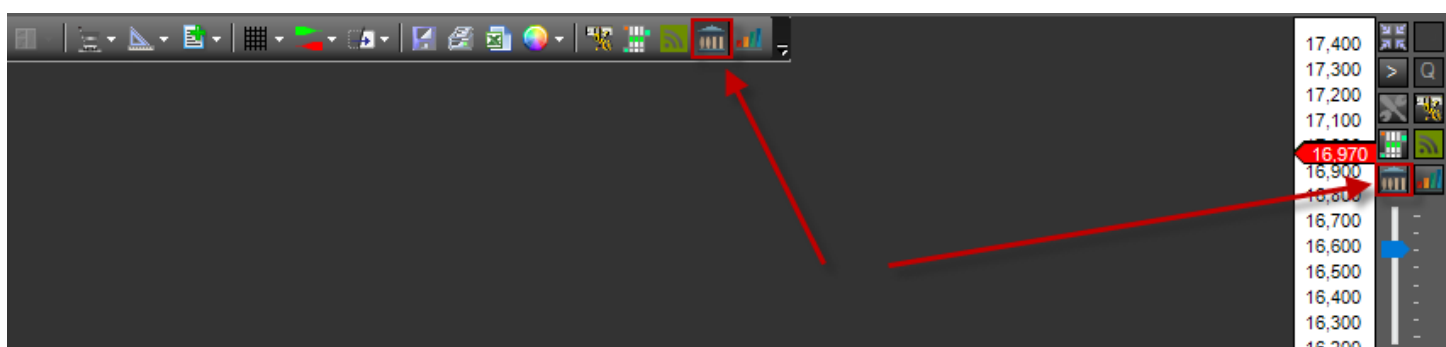


### c. Send option to OptionTradingPad

The OptionTradingPad stays always synchronized to the OptionChain. To send a selected option to the OptionTradingPad, you just need to left-click on the row of the option you would like to trade. If you click in any of the Call-columns, a call with the selected strike and expiry will be sent to the OptionTradingPad, vice versa if you click in any of the Put-columns. You will see the synchronization in the Instrument-field in the OptionTradingPad – it is constantly changing if you select different options in the OptionChain.

## 3. OPTIONTRADINGPAD

With this new pad you can send option-orders very easily to your broker. The pad is accessible from the ChartToolbar and also directly from the ActionBar:



### a. Choose an option (manually)

The „Instrument“ field in the „Order General Settings“ is a read-only field, so you cannot change it directly. This field will get updated according to the changes you are doing below. So you can select the order quantity, if you

want a Put or Call option. In addition, for the expiry if you open the drop-down menu, you will see all expiries available for this underlying. Same logic applies to the Strike-selection.

**b. Choose an option (sync from OptionChain)**

To choose a specific option you want to trade, you can select the instrument you want directly in the OptionChain (described in 2.c) – then Expiry and Strike will be immediately passed to the OptionTradingPad. All you need to choose is the Quantity how many of these options you want to trade.

**c. RealTime Option Data**

If your datafeed is providing realtime information about the option you chose in the „Order General Settings“, current Bid and Ask price is shown in this field, so you quickly can see the latest price of the selected option.

**d. Order Types and Order Expiry**

These settings are the same as for any other order in stocks, futures, etc. – you can place Market, Stop, Limit and StopLimit orders for options. They will be triggered, if the option-price reaches the specified level (so they are not triggered by the underlying price, but by the price of the actual option for which you are creating an order). The order expiry simply manages, how long your order should be valid:

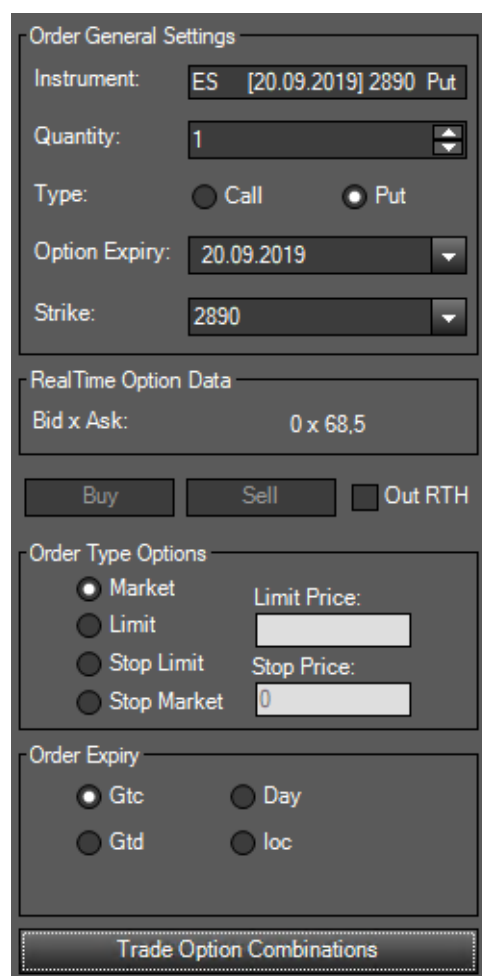
- Gtc = Good Till Cancel
- Day = Valid until end of day
- Gtd = Good Till Date
- loc = Immediate or Cancel

**e. Buy/Sell**

Click the Buy / Sell buttons, to transmit your order to the broker. If you activate the „Out RTH“ checkbox, your order is allowed to be filled outside of regular trading hours – your broker is responsible for these executions.

**f. Trade Option Combinations**

This button currently is without any function, in future with this button you will be able to open the advanced option trading pad, with which you will be able to easily and efficiently trade option combinations like straddles, strangles, spreads, butterflies, etc.



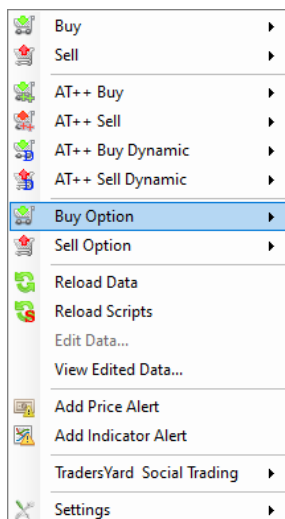
The screenshot displays the 'Option Trading Pad' interface with the following sections:

- Order General Settings:** Instrument: ES [20.09.2019] 2890 Put; Quantity: 1; Type:  Call  Put; Option Expiry: 20.09.2019; Strike: 2890.
- RealTime Option Data:** Bid x Ask: 0 x 68,5.
- Order Execution:** Buy, Sell, and Out RTH (checkbox) buttons.
- Order Type Options:**  Market;  Limit (Limit Price: [input]);  Stop Limit (Stop Price: [input]);  Stop Market (Stop Price: 0).
- Order Expiry:**  Gtc  Day;  Gtd  loc.
- Trade Option Combinations:** A button at the bottom of the interface.



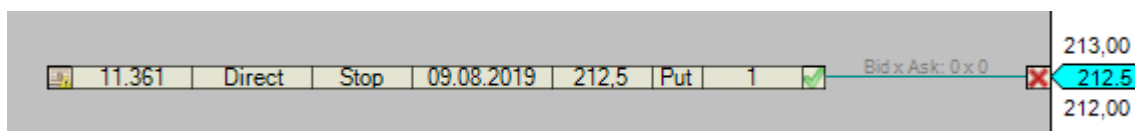
## 4. CHARTTRADING

To place a option-order directly in the chart, you simply open the right-click menu in the chart and choose „Buy Option“ or „Sell Option“:



### a. OptionTraderBar

The TraderBars in the chart for option-orders have new properties, so you can select the option you want to trade directly from the TraderBar:



#### i. Strike selection

- If you click on the strike-price, a dropdown with all available strikes will open up – just select the strike you want to trade.
- **IMPORTANT!** The OptionTraderBar will always be displayed in the underlying instrument at the strike-price you select. So if you select a strike of 250.00, the OptionTraderBar will be shown at a price of 250.00 of the underlying. The strike price is the only real connection between the underlying and the option, therefore the underlying-price and the options' strike price are connected in the chart.

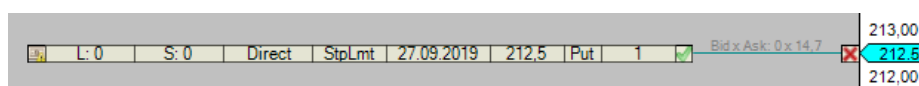
#### ii. Expiry selection

- If you click on the expiry-date, a dropdown with all available expiries will open up – just select the expiry you want to trade.

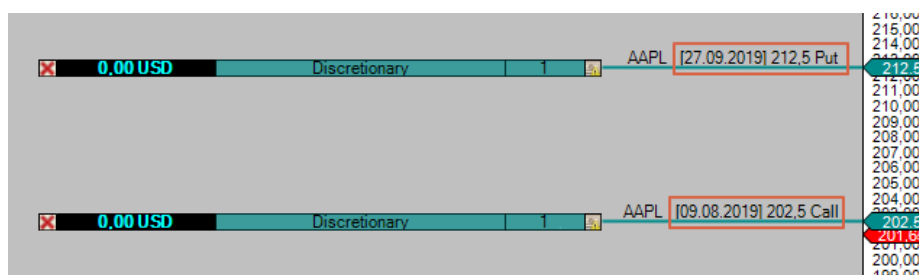
#### iii. Stop price (for Stop-Orders)

- This is the field on the most left side of the TraderBar, you can simply type in the price you want to be transmitted as Stop-price for your order.

- iv. Limit price (for Limit-Orders)
  - This is the field on the most left side of the TraderBar, you can simply type in the price you want to be transmitted as Stop-price for your order.
- v. Stop and Limit price (for StopLimit-Orders)
  - For StopLimit Orders you can select the limit price in the „L:“ field and the Stop price in the „S:“ field.



- vi. Multiple TraderBars per chart
  - For OptionTrades from now on it is possible to see multiple active TraderBars in your chart – each strike price will have its own TraderBar. On the right side of the TraderBar, you see exactly which option you are trading at this strike price at the moment.



## b. Proposal orders vs activated orders

Proposal orders work the same way as orders in all other asset classes in AgenaTrader. You can choose the strike, expiry, stop/limit prices until you are satisfied. Only when you press the green checkmark-symbol in the OptionTraderBar, the order is transmitted to your broker and is now an active open order.

## c. Calculate Profit/Loss

Profit/Loss of option trades is calculated the same way as for all other trades in AgenaTrader: the P&L is calculated inside AgenaTrader with current bid/ask prices. If no bid/ask price is received from your datafeed, P&L can not be calculated and „0.00“ will be shown in the traderbar. Please always make sure that you control the displayed P&L with your brokers' platform.

## d. Mark-color in a ChartGroup

If you are net-long with option-trades (you bought more options than you sold for this underlying), the instrument will be marked with cyan color (long color for options) in a LCG. If you are net-short with option-trades (you sold more options than you bought for this underlying), the instrument will be marked with purple background.

For proposal option-orders the background color of a instrument in the LCG will be light-blue (same as for orders in other asset classes).

e. **Cancel/Close an order/trade**

Cancelling an order or a trade works the same way as for all other asset classes. If you click the red cross in the OptionTradingBar, an active order will be cancelled / an active trade will be closed by transmitting the closing (market) order automatically to your broker.

5. **OPTION-INDIKATORS**

With the new option indicators you can chart options-data directly in your chart and also add them to conditions and signals in your columns or in ConditionEscort. InteractiveBrokers does not provide historical data for options, while IQ does provide historical data for options.



a. **OptionListener**

This is a realtime-indicator, it will start loading data as soon as you add the indicator to your chart. Switch to the 1-Minute timeframe to see some results more quickly. No historical options data will be loaded with this indicator.

Input:

- Expiry
  - o Choose for which option expiry the data should be loaded
- Field
  - o Choose the datseries you want to output with the indicator
- OptionType
  - o Put or Call option data
- Strike
  - o Choose for which strike the data should be loaded

#### b. OptionListenerAtm

Same indicator as the OptionListener, but this indicator always detects the current ATM strike and the nearest expiry, so you can load this indicator as a column to your LCG and e.g. print out any of the greeks values without having to manually select which exact option (strike/expiry) you want to see.

#### c. OptionMultilineListener

Again, basically the same logic as the OptionListener, but with this indicator you can plot many datseries of a single option at once. You have a list of selections which optionsdata should be shown in the indicator panel.

Input:

- Days in Year
  - o Input value for BlackScholes calculation. There are two main mostly used settings: 365days or 250days. The chosen value will affect the greeks and implied volatility calculations.
- Dividend Yield
  - o Input value for BlackScholes calculation. What dividend the underlying yields. As there is not dividend data available in AgenaTrader, you can set the dividend yield on your own. IQ also uses a dividend yield of „0" for their internal calculation.
- Expiry
  - o Choose for which option expiry the data should be loaded
- OptionType
  - o Put or Call option data
- Risk-Free Rate
  - o Input value for BlackScholes calculation. What risk-free rate is available in the markets? Usually returns of US-Bonds are used as proxy for this value. IQ-Feed uses 5% as risk-free rate in their internal greek-calculations, therefore we also take this value by default.
- Strike
  - o Choose for which strike the data should be loaded

#### d. OptionBlackScholesListener

This again follows the logic of the OptionMultilineListener, but this indicator is calculating the greek values and the implied volatility with the BlackScholes formula. It is available for IQFeed and is calculating all values also for historical values (as IQFeed is providing historical options data). You can

#### e. InstrumentExpiries

This new indicator works in future-charts (shows future expiries) as well as in stock-charts (shows stock-option expiries). Scroll the chart to the left and you will see vertical lines in the chart which represent the next expiries for this instrument.



## 6. HOTKEYS

### a. Following hotkeys are available:

- i. Toggle Options Trading Pad (Category „Chart Pads“)
- ii. OptionChain (Category „Charts“)

Both hotkeys are not assigned to a shortcut by default.