



Graybox v5.3 SP6

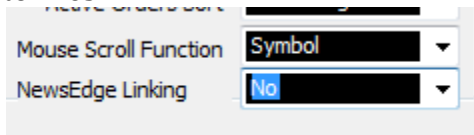
- Fixed issues with 64 bit version with SSR indication
- Fixed general stability issues
- Fixed bug with LULD price update in the Market maker window

Graybox v5.3 SP4

- Fixed a bug with the tick pilot implementation

Graybox v5.3 SP3

- Fixed issue with NYSE stocks showing up with wrong IPO and pilot program tags
- Added support to link with "NewsEdge" (a 3rd party news aggregation platform)
 - To enable the linking from Graybox, go to *Trading Options*, and set NewsEdge linking to "Yes"



- Remember, you need to be on the right version of NewsEdge that has enabled linking with Graybox. Check with NewsEdge support on the right version to use with Graybox
- Fixed issue with custom hot keys and empty destination, sending super ECN key orders

Graybox v5.3 SP2

- Support for Tick Pilot program
 - Will display the caption if a stock is in the pilot program and their respective test groups (e.g [TG1], [TG2], [TG3])
 - Orders sent for the stocks in the test groups will be blocked if its not in increments/multiples of 5 cents
- Fixed issue with the display of SSR indicator in the Marketmaker window

Graybox v5.3 SP1

- Added ARCA imbalances (available in Level1 control of the Market Maker window and the Boardview/Baskets window)
 - New Level1 data item for Paired Qty and Current Reference price
 - Users need to have ARCA Book entitlement to view the imbalances
- Level 1 : Added Vwap (Volume weighted Avg. Price) field.
 - In the Market Maker window, select "Setup->Level1->Choose Level1 Items" and select "Vwap"
- Multiple enhancements for the Graybox API (see API documentation for details)
- Faster cancel when cancelling multiple orders (via Cancel All, Cancel All for Selected Stocks hot keys)
- Added IEX as an Exchange in the quote/Time & Sales montage
- Multiple enhancements for charts, including bug fixes and stability issues. Some of the fixes include:
 - Issues with Weighted moving average
 - Volume bars
 - Some 1-2 min bars where incorrect
- 64-bit version available for Graybox
- Fixed issue with SuperECNKey and Floating buying power limitations

- Fixed issue with LULD (limit up/limit down) price not updating
 - New Icons and splash screen
 - General performance and stability improvements
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v5.2 SP3

- Fixed issue with getting historical volume for charts
- Fixed issue with disappearing studies such as SMA in certain kinds of charts

v5.2 SP2

- Fixed some stability issues with Graybox charts

v5.2

- Added new routes: These routes are midpoint orders with Add liquidity only flags.
 - NSDQ-MID-ADD
 - EDGX-MPL-ADD
 - EDGA-MPL-ADD
 - XBOS-MID – ADD
- Add new mode for custom hot keys – SET & LOCK. These hot keys lock the price in the MiniOE window at the time the key is pressed
- Added EDGA-RMPT as a mid-point type for self crossing checks.
- Fixed stability issue with linked charts.
- Added ability to change the foreground color (font color) for each levels in the market maker window
- Added verbose RTE (ROUTE) column for each order in the Active Order, All Orders and Messages windows
- Improved performance and stability
- New routes to dark pools added: (not available for all MPIDs)
 - DTTX-TRIM
 - DTTX-COVERT

- MLNX (Merrill Lynch)
- UBSS (UBS Securities)
- DBAX (Deutsche Bank)
- BIDS
- SGMA (Goldman Sachs)
- ATDF (Citi)
- Fixed issue with mid-point orders to IEXG
- Added ability see time in HH:MM:SS AM/PM - instead of just military time - for Market Clock
- Add a new "Smart ECN Order Entry" window

v5.1

- Added new routes in the Mini OE window
 - NYSE MIDPOINT
 - NYSE MIDPOINT ADD ONLY
 - BYXX MIDPOINT
 - BYXX MIDPOINT ADD ONLY
 - NQPX ADD ONLY
 - NQPX MIDPOINT
 - XBOS MIDPOINT
 - NSDQ MIDPOINT
 - DTTX MIDPOINT
 - DTTX PASSIVE LIQUIDITY
- Fixed bug with duplicate orders from the Pref window for NSDQ and a few other destinations
- Added new order types for BYXX, NQPX, XBOS, NYSE and NASDAQ mid point orders.
- Fixed bug with PDQM button in the Preference window
- Fixed bug linking multiple colors with Esignal v11 linking mode
- Added new hot keys for the Preference and Listed trading windows to send the following orders:
 - EDGX MPM (mid point match)
 - EDGA MPM (mid point match)
 - ARCA MPL (mid point limit)
 - BATS MPP (mid point peg)
- Updated to the latest version of Activ SDK and Workstation.
- Added LULD (LimitUpLimitDown) values for each stock in the market maker window. LULD price range is a band that prevents trades in NMS stocks outside this band and causes trading pauses when it does due to fundamental price moves
- New Algo routes: DARK-X, FREE-X and MID-X
- General stability fixes, including some crash issues that have been reported
- Fixed Issue with 2-min charts

- Added access to JPMX (JP Morgan dark pool)
- Fixed bug with disconnect from the desktop API

v5.0 SP4

06/30/14

- Enabled auto-reconnect on getting a server side disconnect from the quote system
- Enabled better handling of order flow when a stock is halted.
- Adjustment for handling Graybox MOC imbalances in the Market Maker window
- Enabled a separate route for IPOs orders to their listing exchanges e.g. NYSE, NSDQ and ARCA. This is automatically handled, provided that the symbol is setup correctly as an IPO

v5.0 SP3

05/22/14

- Added new destinations:
 - PLUS – All in, dark + lit smart order. This will work for OTC Bulletin Board and Pink Sheet stocks
 - IEXG – IEX ATS
 - FLOW – Lava Flow ATS (they quote as ADF)
 - EBXL – Level ATS

- GBDK- AGRO/MEDO/LOCO - Enabled with logic to access some market makers for OTC/Pink Sheets
- Fixed issues with routing to ARCA for OTC stocks, by directing orders to ARCA.EDGE rather than generic ARCA.
- Enabled “Optimization” for market data to reduce CPU and bandwidth footprint
- Fixed issue with T&S or Prints window having stale data or sometimes no data
- Improved performance with back up quote system
- Charts load only “regular” bars during market hours
- Added support for SSR indicator on the *MarketMaker* window
- Added support for HALTED indicator on the *MarketMaker* window
- Fixed bug with real time imbalance updates for NYSE stocks

v5.0 SP2

05/08/14

- General Performance Improvements
- Fixed bug with symbol subscription/un-subscription that was leading to high network and machine CPU usage
- Added cached prints for standalone T&S windows
- Fixed market clock issue that was not setting market open/close properly
- Faster load-up of initial prints cache and historical data in charts
- Improved installation package
- Fixed bug with getting level1 BBO quotes when not subscribed to Level2
- Fixed market clock issue that was not setting market open/close properly
- Added time stamp for cached prints display
- Added a feature to disable “Slow Link Optimization” for level1 data. (Turn off “Enable Slow Link Optimization” in Setup->Backup Quotes). Users with latency > 100 ms to our US based data centers are strongly advised to turn this on.

v5.0 SP1

04/30/14

- Fixed issue with incorrect Contra \Exchange display

v5.0

- Faster, reliable and more accurate market data using next generation ticker plant and technology – with inbuilt redundancies and failover
 - Access to level1 quotes for OTC markets, including Pink Sheets and bulletin boards
 - New execution venues supported – FLOW (LavaFlow), EBXL (Level ATS)
 - New all-in Dark+Lit managed smart order route – GBDK-AGRO+
 - Faster loading up of charts
 - Imbalances for AMEX and ARCA listed securities, if entitled
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V4.1 SP6

10/31/13

- Added Stub quotes (= last print) for stocks with no inside bid/ask data. This will allow Pref window to have last print on refresh.

v4.1 SP5

10/31/13

- Fixed bug with backup quotes that displayed blank quotes in the level2 display

- Added GBDK destinations to the “Custom Hotkey” setup window

v4.1 SP4

10/18/13

- Added full support for GBDK via the hotkeys for Preference window, Listed trading windows.

v4.1 SP3

10/03/13

- Added full support for GBDK – Graybox dark pool aggregator – destination.
 - The route will come with 3 different modes
 - GBDK-AGRO – tries to access as many dark pools & ATs as possible, High Cost
 - GBDK-MEDO – tries to access medium and low cost dark pools and ATs, Medium Cost
 - GBDK-LOCO – tries to access only low cost dark pools and ATs, Low Cost
 - Orders can be sent as IOC or DAY
 - Available via SuperECNKey and all Order Entry windows
- Access to CSFB re-enabled
- Some stability issues with previous SP fixed

Note: GBDK and CSFB are not enabled for all MPIDs.

v4.1 SP2

09/18/13

- Fixed routing issue for NSDQ orders for some MPIDs
- Added support for GBDK – Graybox dark pool aggregator - destination

v4.1 SP1

07/18/13

- Fixed bug with the sending TRACKING orders via the Preference window\Listed Trading window
 - Issue saving SuperECNKey delta type fixed
 - Added new hotkeys for MSCO dark routes
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v4.1

06/28/13

- Added support for **Morgan Stanley Algo\Dark** routes
 - **MSCO-NVSN**
 - Access to Morgan Stanley's dark pool aggregator
 - **MSCO- NOWL**
 - Access to Morgan Stanley's dark pool & lit market aggregator
 - **MSCO- SORT**
 - Access to Morgan Stanley's smart order router that access all the lit exchanges
- Added support for **DARKPING route from ALTX (ITG Posit)**
- Enabled access for **CBSX, NSXS**
- Added a new color scheme (blue background\ white font color) to distinguish irregular prints in the Sales window
- Trailing Stop orders will ignore irregular prints for their triggers (if based on last print)
- Added a new order type called "**TRACKING ORDERS**".
 - These tracking orders are triggered when the inside bid (for sells\shorts) or inside ask (for buys) hits the tracking price. These tracking orders do not float on the exchanges and are not displayed. They trigger an IOC order to the selected destination.

- Allow **SHIFT+4** if set as a hot key to override native functionality ('\$'). This was an exception to allow entering of \$ for preferred symbols when the focus is on the Symbol edit window
 - New entitlement control for “web blotter” access via the client
 - Added SuperECNKey delta type. Users can control if the **deltas set for their SuperECNKey is an absolute value or a % value**
 - Added a new option to display BBO quotes from exchanges even if their books are available (MM window->Configure Books)
 - API : Fixed issues with OPG orders to NYSE going out as DNS
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v4.0 SP2

02/07/13

- Added Support to link with ESignal v11.3 or better
 - To enable the link, go to Trading Options and select “*ESignal 11.x*” for **ESignal Linking** dropdown.
 - In ESignal 11.x, users MUST enable the Quote Bar.
 - In ESignal application, go to Options->Toolbar and enable “Quote Bar”
 - The linking will not work without the Quote Bar being enabled and visible
 - In ESignal 11.x linking mode:
 - Only linking from Graybox to ESignal is enabled (“To”). Changing symbol in ESignal will not change the symbol in Graybox.
 - Graybox will not start ESignal anymore. The linking will work as long as ESignal 11.x is running on the machine.
 - There is no need to kill ESignal if you need to close and reopen Graybox.

v4.0 SP1

02/06/13

- Fixed instability issue related the All Order window

- Fixed instability issue related to the Position Close out features
- Added fixes for the Global Stock Alarm feature
- Added filter for ignoring 'D' prints for triggering trailing stop orders
- Improved performance with backup quotes
- Added new preconfigured hot keys
 - Marketmaker window -> ARCA MKT BUY/SELL/SSELL
 - Pref\Listed Trading window -> ARCA-PL (Hidden) Order

v4.0

01/24/13

New Features

Custom Keystrokes

- Allows programming of keystrokes along with associated logic. Can be accessed from 'Configuration-->Keyboard Config--> Custom Hot Keys'.

Global Alarms

- New feature for setting stock alarms from Market maker window when 'Last', 'Bid' or 'Ask' crosses certain preset value. Can be accessed from Market Maker window from the 'Bell' icon or from 'View' --> 'Global Alarms'. User friendly interface allows quick addition of new alarms. Also, allows multiple price point alarms for the same stock.

Positions Monitor

- Included new tab to show Closed positions

All Orders window

- *All Order Window* is a new feature to show log of all the orders and its current status placed for a day. Floating, Cancelled, Executed orders are shown in separate tabs.

Linking windows

- New feature that allows visual displaying the link between a Market maker window and other T&S, Chart, ECN Open Book, NYSE Open Book, Board View window etc.
- Link window can be enabled by 'Linking window' option from Graybox main window's right click menu.
- Color coded linking schemes allows a quickly and easy way to change or remove linked windows

Charts

- Improved performance
- Auto mode which loads data for the last 2 trading days
- A new charts settings dialog
- Display Price to customize the number of decimal places shown on the Y-axis
- "Market hours only" control to filter data to exclude pre and post market activity
- Day line to differentiate data between 2 trading days

New Routes

- Added an ARCA based DOT route called NYSA. It supports DNS (Do not ship), MOC\LOC and Market At Open Orders
- Added new BBSS provider for floor broker access (BRZR). In order to use this provider, select "BRZR" for "Default BBSS Use:" in Trading Options
- AXTN and DTTX Nite Covert, BATS MPL Post Only,

Mini OE

- New Configure Destination list to select only those destinations that are used often and to shorten the ECN drop down list in Mini OE. Accesible from 'Market Maker-->Setup-->MiniOE-->Setup-->Configure Destinations list'.
- Option to setup Liquidity in 'Add' or 'Remove' mode by default.

Misc & Others

- Link to Analytics, Symbols from Market maker window and from Analytics can be dragged and dropped into one another.
- Optimized for improved performance and built for Windows 7 OS using the latest Windows SDK
- Support for ARCA Book based on Tape Types
- Supports compliance flags based on Company ID
- Added ability to enforce % away erroneous order enforcement at a configurable value per Traderid
- Removed Market Depth option from Market Maker->View popup menu
- Ignored blocking of crossing orders if a market order on the other side is stuck due to a system error
- Volumes in Level I quote of Market maker can be shown in K's and M's.
- Justify Alignment in Level I quote of Market maker to Left, Right or Center.
- Time and Sales control to display price to 2, 3 and 4 decimal places.
- New ECN OE Toggle list from 'Setup' right click menu of Graybox main window.

Bug Fixes

- Fixed instability due to updating of stop orders in the Active orders\All Orders windows
- Fixed issue with reconnect , not sending the companyid to the quote servers
- Additional Fix for the bug with the initial symbol sub on a reconnect not getting the compliance flags based on CompId.
- Fixed a bug with the initial symbol sub on a reconnect not getting the compliance flags based on CompId.
- Fixed logon issues with book servers and TV(Inet book) servers

v3.6.0 SP6

beta:3

06/05/12

- **Mini OE**
 - Added option to choose the default liquidity mode (Add or Remove)
 - From a Market Maker window, right click and select Setup->Mini OE
 - Choose “Add” or “Remove” for default liquidity
- Possible fix for crash during making hot key changes using KeyMap Config dialog
- Fix bug with quote entitlement check for NYA and BYZ listed stocks

beta:2

05/20/12

- **Mini OE**
 - Added new hotkeys to use PDQM route
 - Added new hotkeys to increment & decrement limit price by 0.05/0.10 cents
 - Added new hotkey to toggle between Trailing Stop and regular Limit order types
- **MM Order Entry Window**
 - Fixed bug with “Opening Cross” order type
- Put a new explicit check to prevent any trader with no quotes for a particular exchange to trade stocks listed on that exchange.

beta:1

05/07/12

- **Graybox Desktop API**
 - Added a new mechanism to get callback messages via a TCP/IP socket

v3.6.0 SP5

03/14/12 – beta:5

- Fixed the bug with automatic resetting of Stop Loss when changed from the Graybox RM. This was forcing users with intraday changes to close and reopen Graybox for the change to take affect.

03/08/12 – beta:4

- **PDQM** – Fixed some issues with PDQM implementation.

03/06/12 – beta:3

- **PDQM** – Added support for the PDQM destination (PDQ ATS)
- **Mini OE:** Fixed issue with the ENTER key not sending orders, at times, after using a hot key to set the destination
- **Mini OE:** Fixed issue with sending of orders for INET when HIDDEN:ON was enabled
- **KeyMap Config:** Possible fix for some crash reports when setting or modifying hot keys

02/22/12 – beta:2

- Added buttons for ARCA-PL (Passive Liquidity) orders in the Listed Trading and Preference windows
- On HIDDEN mode, ARCA-PL orders are not set with Reserve Qty as these orders are already hidden. Setting a min. display qty was causing a reject from ARCA
- Fixed a couple of reported bugs with BYXX default destination and Resv. Qty dialog from the previous beta

02/13/12 – beta:1

- **Desktop Execution API**
 - Added ability to send routing modes for all supported execution routes. (for details, see Desktop API specs at <http://support.hold.com/api>)
 - Fixed bug with the “GbxId” – Graybox defined unique OrderId – not being set in the callback message
 - Added defines for new execution routes
 - Added additional information in the ErrorMessage field of the callback message for incoming execution messages. The ErrorMessage field will contain the – ExeQty, QtyLeft and Liquidity Flag. (The combination of GbxId and QtyLeft will define the unique intraday execution id in the system)
- **Resv. Qty Dialog**
 - Fixed bug with Resv. Qty Dialogs when the *Show Qty* short cut buttons were setting the Reserve qty, rather than the Display Qty. e.g. if you click on “Show 100” button, the Display Qty is set to 100 and the rest of the Order Qty is set as Reserve.

- **Mini OE Window**
 - Fixed bug with BYXX hot key that would not automatically select the default routing mode for BYXX
 - Fixed bug that was not resetting the Resv. Qty dialog when HIDE:ON was toggled to HIDE:OFF

- **Trading Options**
 - Fixed bug with the saving of the *Max Compliance Mode* setting

- **ECN Order Entry Window**
 - Fixed bug with the handling of symbols > 5 characters

- **Cancel Floating Buys on Closing a short position**
 - Cancel request(s) will be sent for floating buys(if any) for a stock as soon as a long position in that stock is covered
 - This feature (default disabled) can be turned on by enabling the “Cxl Floating Buys On Covering Shorts” check box in Trading Options

- **New Routing Modes for ARCA**
 - They are available as global defaults via Trading Options or can be set individually via the various Order Entry Windows. The definitions for the following ARCA types, as per NYSE ARCA Fix Specs.
 - **Passive Liq (PL)** - A Passive Liquidity order (PL) is an order that is never displayed externally. It’s ranked behind display and reserve orders and ahead of all other orders. (*For NYSE Arca Primary Listings, this order type is available to Lead Market Makers only*)
 - **PSO Route (PSO S)**- The ‘Primary Sweep Order’ sweeps the NYSE Arca Book and routes any remaining balance to the primary listing market (NYSE, NASDAQ or AMEX).
 - Can be Market or Limit order
 - Should be marketable.
 - Nonmarketable orders will function as limit orders.

Orders can be entered beginning at 3:30 a.m. ET until the end of core trading.

 - When orders are routed to an away market, the order will retain its qualifier
 - When routed, the PSO is designated as non-routable and IOC by the primary market or Do Not Ship (DNS)
 - For limit orders only, the order will not be sent with the DNS (Do Not Ship) Instruction on NYSE Listed Symbols. The order will be eligible for routing away at the NYSE.

- **PnP Blind (PNP B)** - Marketable Contra Orders will first execute against the PNP B Orders, then the rest of the book. PNP B Orders will be ranked in time priority regardless of the price of the order when they are blind. When the PBBO moves away from the price of the PNP B but the prices continue to overlap; the PNP B will remain blind but adjust its price to the PBBO. When the PBBO moves away from the price of the PNP B and there is no longer price overlap, the PNP lights up and becomes a regular limit order including standing its ground
- **PnP-Lite Only (PNP LO)** - PNP LO orders are limit orders that do not route to away markets. Marketable incoming PNP LO orders will trade against any displayed interest and post remaining shares to the NYSE Arca book. PNP LO orders that lock or cross the National Best Bid and Offer (NBBO) will cancel back to the order sending firm. Incoming PNP LO orders will also cancel back to the order sending firm under the following conditions: If incoming PNP LO order is marketable against any non-displayed interest present in the NYSE Arca book, including resting PNP Blind (PNP B) orders and hidden portions of reserve orders. Once posted and disseminated, the PNP LO order will stand its ground, i.e. it will not route or cancel if locked/crossed by an away BBO.

v3.6.0 SP4

01/24/12

- **RISK – Added enhancements for the Stock Concentration % limits**
 - Concentration % limits will be enforced in the same we enforce Floating Buying Power (FBP) and Buying Power (BP) limits - except that the % limits apply only to a particular stock. They act as BP and FBP limits for an individual stock.
 - Concentration % limits apply to both BP and FBP. In previous implementation, it was only applied to BP. In essence, a pre-order check has been added to complement the post-execution check that existed earlier.
 - There are two entitlements for Concentration %, one each for PrePostMkt and Regular Market hours. They consider the BP and FBP allocated for PrePostMkt and Regular Mkt hours and apply the correct % values to them.
 - In case, a trader breaches his Concentration % limits for a stock, the trader will be allowed to send covering trades for that stock only and cancels will be sent for orders that can potentially lead to “overcovers”.

- If a trader breaches his Concentration % limit in a stock and he has enough overall BP/FBP available, the trader will be able to send orders as normal for other stocks.
- Fixed bug saving the “Default AMEX Provider” in Trading Options. This was impacting hot keys that automatically detect and send orders to the correct listing exchange.

v3.6.0 SP3

01/13/12

- **Default Step Size:** Fixed bug with “Auto Insert Def” Qty setting that was automatically setting the default step size to 0.01
- **NYSE Imbalances:** Display of Imbalances for NYSE listed stocks controlled by a new quote entitlement called “NYSE Alerts” as opposed to “NYSE OpenBook”. Users don’t need NYSE Open Book entitlement to see Imbalances for NYSE listed stocks.
- **Round lot Size = 0 :** Fixed bug that was crashing Graybox if the Round Lot Size for a stock was incorrectly set in the backend to 0
- **Mini OE Window:** Issue with manually entering the Qty using the number keys fixed
- **Mini OE Window** - Added following new hotkeys for the Mini OE Window
 - Set MILL Buy @ Inside Ask
 - Set MILL Buy @ Inside Bid
 - Set MILL Sell @ Inside Ask
 - Set MILL Sell @ Inside Bid
 - Set BYXX Buy @ Inside Ask
 - Set BYXX Buy @ Inside Bid
 - Set BYXX Sell @ Inside Ask
 - Set BYXX Sell @ Inside Bid

v3.6.0 SP2

01/10/12

- Issues with Step size in Order Entry windows fixed
 - Fixed the resetting of step size of stocks that have a default. Once a stock with a step size default is changed, the step size should change to previous value OR the saved default for the MM window (if **Trading Options ->Step Size Based on Marketmaker Wnd** is enabled)
 - Does not reset Step size back to 0.01 – Global default - unless a user have never set the Step size or saved 0.01 as the default step size of the MM window

v3.6.0 SP1

01/04/12

- Fixed reported issue with HBES routing exchange not getting updated on loading floating orders
 - Auto Close Mode – Fixed issue with order qty reset when adding to position
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v3.6.0

12/23/11

New Features

Time & Sales Window

- Filter for size feature added
- Added ability to “Show Qty in 100s”
- Added “Always on Top” option

Mini OE Window

- Provides a new option to set the default focus value. Users can decide which field will have the focus when they change a stock or set focus on an existing MM window. This can be controlled using **Setup->Mini OE** from any Market Maker window
- Added a new button to **HIDE:ON** or **HIDE:OFF** orders. This will send hidden orders to routes that support it.
- Added a “Cancel All” button for selected Stock button
- Added “Lock” destination button – that will lock the entry in the destination field
- Added “LST-EXCH” as a destination that will send orders to the listing exchange for the particular stock. This will also be the default route.
- Custom Order Entry buttons for the Mini OE window. These buttons will appear in a new panel below the Mini OE window and allow single click order entry based on preconfigured settings (Side, Destination, Price). They can be configured using **Setup->Mini OE** from any market maker window

Boardview

- Added “**Alerts**” (They can also be opening by click on “**Open->Alerts**” from the main Graybox window)
 - Alerts can be set by entering a symbol in the Boardview window and right clicking and selecting the “**Set Alerts**” menu item
 - Users can use the “**Set Alerts**” dialog box to send the alert condition(s)

- The behavior when alert is triggered can be controlled by clicking on “**Setup->General**”. Currently, users can enable an audio alert or\and flashing of the row or\and messages sent to the Notifier window

Desktop API

- Performance improvement during stress conditions when a large number of orders are sent quickly
- Send an explicit “Subscribe” not needed if sending orders for a symbol. Explicit subscription should only be used judiciously, and should be followed by Unsubscribe eventually.
- Added a new message type to unsubscribe to a symbol, if manually subscribed earlier
- When requesting all current positions, the `GBXCTRLLib::MSG_GBX_POSITION` with Symbol = “”, and Qty = 0 will signify End of transmission i.e. all the position information has been sent.

Compliance & Risk

- Added support to identify IPOs. A check has been added to prevent sending of Market Orders before an IPO has opened
- Fixed an issue that could prevent the self-crossing prevention logic from applying at times.
- Plugged loop hole that allowed sending market orders when no level1 data is available (and no risk calculation can be made)
- Fixed the issue where the users could flip positions by over covering when FBP or BP is not available and they send covering trades that are equal to their position size
- MOC orders after 3:45 PM cutoff – Will treat originating orders as a covering trade if there is a MOC order floating beyond the 3:45 PM cutoff
- Clearly Erroneous order check – Will block orders that are 25% away from the inside market
- Fixed loop hole that could be exploited to go over assigned buying power – while over covering positions. Now attempt will be made to cancel previous covering orders if placing a new covering trade – if Floating BP becomes zero

Misc & Others

- **Position Monitor:** Changed name of field “Buying Power” to “BP Avail”
- **Swipe Keys:** Added a new Swipe Based On – “Inside Mkt – Add”. This can be used to configure swipe keys that help in adding liquidity or joining the bid/ask

- **Market Clock** – Will display when the market is “CLOSED – PRE MKT” closed and “CLOSED – POST MKT”. Also, will display when the MOC Cutoff time has elapsed
- **Market Maker Window:** Filter for size is enabled for the Sales (Prints) display in the MM window. Select “Setup->Prints” to set the minimum print size to display
- **Reserve Qty:** Added ability to **Hide All** and **Show 100, Show 200, Show 300, Show 400 and Show 500 buttons** in **Set Reserve Qty** dialog box for single click modification
- RASH destination has been renamed as NSDQ
- **Market Maker Window:** Ignores for Post Mkt Hours – Users can ignore market participants from displaying in the MM window (that will only be active during post market hours). Right click and select “Ignores for Post Mkt Hrs” from each MM window and enter the MPID to be ignored. Keep in mind, the old ignores list is active for all times.
- **Charts** – enable\disable the 3-D mode for the charts display
- **MM Order Entry window** – Added an option to display buttons in multiple lines
- **Default Step Size:** Added ability to save “Step size” per stock using Trading Options. If a step size is saved per for a stock, all order entry windows – MM Order Entry Wnd, Mini OE Wnd, Listed Trading Wnd, ECN Order Entry Wnd and the Preference Wnd will be set to the default on changing symbols (Saved as part of the local layout. This is current not saved with the roaming profile)
- **Always On Top:** Added the option to enable\disable “Always On Top” for the Active Orders window, Positions Monitor, Market Clock, Execution Ticker, Notifier window, Hedges & Locates Monitor (Right click and check\uncheck “Always On Top”)
- Ability to turn off the Menu, Toolbar, Title bar and Status bar for the Active Orders window. (right click and select Setup)

Bug Fixes

- Fixed problem displaying negative MACD values in Charts
- Fixed issue saving “Enable Point & Click to Set Price” for the Setup->Order Entry window. This controls mouse based price update for the Market Maker Order Entry window and the Preference window
- Fixed memory leak with the Times & Sales window
- Fixed issue reported with “Avail BP” display in the Position Monitor
- Fixed bug with Market Clock prior to the Open
- Improved display when a stock has no bid or/and ask quotes
- Removed “Trade Assignment” functionality
- Does not connect to “TV (INET Book) Server” if not entitled for INET Book

- Auto reject Locate feature request will only work if the Min price is > 0.00. Earlier it was treating 0.00 as a valid min price and rejecting locates automatically.
- Fixed bug with loading symbols with non-alpha characters such as Preferred in the Boardview window via a file
- Added support to handle BBSS-BoothIds from line handlers from the order status message
- Manual Order Entry window - Possible fix to a bug where an entered limit price is overwritten, at times, by inside market,
- Fixed the issue where the BP Avail field in the Positions Monitor was not updating during RMS updates
- Desktop API - Fixed crash on disconnect
- Fixed issue with quote entitlements that allows viewing of entitled book quotes even if not entitled to depth feeds from the listing exchange. E.g. if a user is not entitled for NASDAQ level2 but entitled for BATS book, the user can view the BATS book.
- Optimized the Active orders window to improve peak time performance
- Prevents multiple BP checks on receiving multiple market open/close messages from various exchanges. Only one check is done now

v3.5.1 SP9

08/01/11

- Fixed a bug loading KeyMap Config dialog

v3.5.1 SP8

08/01/11

- Fixed a bug with bad **EDGA book quotes** from backup quotes
- Added support for SGNT network – for ASNX and LTCO
- Bug with default qty resetting in the Market maker window fixed
- Bug with sending two orders from the BBSS orders in Mini OE window fixed
- Added handling for BATS book flush
- Fixed issue with imbalance updates during times of minimal quote activity
- Fixed bug with RMS instructions, not cancelling all non-covering floating orders when CTO mode set.

v3.5.1 SP7

06/23/11

- **Limit On Close** orders bug when sending LOC orders to NYSE after cutoff time fixed.
- Order type **Limit On Close and Market On Close** can be used exactly the same way for ARCA, RASH (NSDQ), NYSE, NYSE-AMEX, HDOT, BELZ by using just the drop down in the MiniOE or MM Order Entry windows. (Earlier ARCA needed explicit Time In Force values).
- Added ability to “**drag and drop**” a **Symbol using a mouse from a Boardview window** to any Market Maker window or Time & Sales window. This will work even if the two windows are not linked.
- **Time & Sales window** color schema reflects on the entire row and not just the price column
- **Time & Sales window** fixed bug with the saving of column widths in the layout
- **Swipe keys** – fixed a possible cause of freezing when using the “Inside Market – Take” Swipe based on mode.
- **BATS MPP – Mid Point Peg** Orders are supported at the client level. They are available via Trading options or using the MiniOE destination drop down and hot keys. (Not immediately available for use as Server upgrades are needed)
- Bug with viewing **Imbalances** (Column **Imb**) in the **Boardview window** fixed
- Warning added when exiting Graybox with Order Floating. The warning box allows users the option to cancel all floating orders at the close.
- Speeded up the loading of the **KeyMap Config** window, for the first time
- Support for **NSDQ Imbalances**. Users need to have INET Full Book (NSDQ Total View) entitlements to view them

v3.5.1 SP6

06/14/11

- Exempted floating BBSS orders from getting cancelled due to the oversell prevention algorithm
- Desktop API – Fixed a bug when proactively subscribing for stocks
- Fixed a bug with using the “Toggle Order Type” hot key for the Mini OE window
 - Added new pre-configured hot keys for the Mini OE window
 - They can be configured to a hot key of choice using the KeyMapConfig dialog (Market Maker window tab)
 - The new keystrokes are as follows:

Market Maker Window

Menu	Group	SubGroup	Action
MiniOE	Orders	SS	: BBSS - 3L Buy @ Inside Ask

niOE	ders	SS	: BBSS - 3L Buy @ Inside Bid
niOE	ders	SS	: BBSS - 3L Sell @ Inside Bid
niOE	ders	SS	: BBSS - 3L Sell @ Inside Ask
niOE	ders	CA	: ARCA MPL Sell @ Inside Ask
niOE	ders	CA	: ARCA MPL Buy @ Inside Ask
niOE	ders	CA	: ARCA MPL Buy @ Inside Bid
niOE	ders	CA	: ARCA MPL Sell @ Inside Bid
niOE	ders	GA	: EDGA MPM Buy @ Inside Ask
niOE	ders	GA	: EDGA MPM Buy @ Inside Bid
niOE	ders	GA	: EDGA MPM Sell @ Inside Ask
niOE	ders	GA	: EDGA MPM Sell @ Inside Bid
niOE	ders	GX	: EDGX MPM Buy @ Inside Ask
niOE	ders	GX	: EDGX MPM Buy @ Inside Bid
niOE	ders	GX	: EDGX MPM Sell @ Inside Ask
niOE	ders	GX	: EDGX MPM Sell @ Inside Bid

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- Added new pre-configured hot keys for Cancelling Orders
 - o Four new keystrokes when configured will allow users to cancel the oldest buy order (for any stock), old buy order for selected stock, oldest sell order (for any stock) and oldest sell order for selected stock. (**Graybox tab**)
 - o The new keystrokes are as follow:

aybox

nu	oup	bGroup	nction
ecute	ncel Order		ncel Oldest Buy
ecute	ncel Order		ncel Oldest Sell
ecute	ncel Order		ncel Oldest Buy Selected Stock
ecute	ncel Order		ncel Oldest Sell Selected Stock

v3.5.1 SP5

06/06/11

- Exempt orders routed to BBSS – Floor broker from the pre-order wash sale prevention logic
- Fixed bug with entering Preferred Stocks in the Boardview window.

v3.5.1 SP4

05/20/11

- Allows HBCL MPID traders to use the HOLD ETB list
- New feature that will allow the Logon servers to make temporary intraday changes in BP/FBP using BP/FBP factors. This will preserve the original values for BP/FBPs set for the traders.
- Allow resizing of the Trading Options dialog
- Bug with Open Orders in the level2 display disappearing on a quote server reconnect fixed
- Send Account ID in addition to the BRSQ in the messages to the order routers
- Fixed issue with risk entitlement setting of “Max # of positions held at one time”
- API: fixed crash on sending orders for known symbols, problem with MOC orders and sending of NYSE orders

v3.5.1 SP3

04/20/11

- Added a new feature to **automatically trigger a Graybox Client based Trailing Stop on Entering or Adding to a Position.**
 1. To enable this, right click on the Main Graybox window (Active Orders window), select “**Setup->Trailing Stops**” and enable the “**Auto Trigger Trailing Stops On Entering Positions**” check box.
 2. The settings used for this is the same as the settings for the “Direct Trailing Stop Hot key”
 3. This feature is available only during market hours and only during the process of entering a position or adding to an existing position. *This is not available when carrying over positions between multiple Graybox sessions or when carrying overnights.*
 4. The trailing stops reduce in qty as the positions are covered. They are cancelled completely when the position is closed.
 5. The trailing stops are active only during a Graybox session. They cancel on close and are not automatically reactivated on a restart.
- Fixed a possible loophole that could lead to short orders being sent for Hard to Borrow stocks. This could happen randomly for API users as well those using Trailing stops.

- Fixed bug with Reflash Orders functionality. The Reflash Orders feature now uses Cancel\Replaces for ECNs\Exchanges that support it. For those that don't, it cancels and then sends a new order with a different limit price.
- Desktop Execution API – Will reject orders if the API user sends an order with a duplicate BBID for the session. The API users are asked to send Orders with unique BBID per session.

v3.5.1 SP2

04/06/11

- Added new route for CSFB – PATHFINDER
- Added “INTRADAY SHORT ONLY” warning for Stocks designated as Threshold Security.
- Bug with Boardview column order when loading from a csv file fixed
- Graybox Desktop API: Issue with GrayboxID not getting correctly passed back fixed.

v3.5.1 SP1

03/14/11

- Fixed a loop hole that could potentially allow a trader to breach the Floating exposure limits, when using the SuperECN key
- Fixed bug with Locates->Auto Reject feature
- Crash when trying to manually find the status of an order – when there are no order floating – fixed.

v3.5.1

03/10/11

- Fixed issue with the MiniOE Window that could update the limit price even if LIVE mode was turned off.
- Allows users to query the Current Status of a floating order. (Right click on the floating order in the Active Order Window and select the “Check Order Status” Menu item. The result of the query is available in the Notifier window as well as the status tray notifier pop up.
- On logging on to system, Graybox attempts to figure out the status of the orders that were floating from the previous session. The ones that are not active are removed from the Active orders window
- Allows a new Graybox session, on a new machine, to show active orders from a previous session on another machine.
- Bug with slowing down of Market Clock, when running for a long time, fixed
- Added support for symbols that are greater than 6 characters including suffixes
- Fixed issue with stuck quotes for ECNs (being ignored by the MM window) but not by various Order entry windows

- Swipe keys: Added new option for the Swipe keys to remove liquidity for ECNs. Also, added missing ECNs from the Swipe keys such as XBOS, NQPX, DTTX, etc. The Swipe keys options can be set by right clicking on the main GB window and selecting **Setup->Swipes/Delta Keys**. The hotkeys can be assigned using KeyMapConfig dialog.[Note: There are 6 sets of Swipe keys that can be configured independently]
 1. The various options for **Swipe Based On** is as follows:
 1. **Swipe ECN Book** – Send Limit Order at Swipe Factor +/- Best Exchange Bid (for Buys) or Offer (for Sells), if quote is detected for the ECN or Exchange.
 2. **Level1 Inside** - Send Limit Order at Swipe Factor +/- Best Level1 Best Bid (for Buys) or Offer (for Sells)
 3. **Inside Mkt Consolidated** - Send Limit Order at Swipe Factor +/- Best Level2 Displayed Best Bid (for Buys) or Offer (for Sells)
 4. **Negative Inside Mkt** - Send Limit Order at Swipe Factor -/+ Best Level2 Displayed Best Bid (for Buys) or Offer (for Sells) [Will put the order below the best bid/offer displayed for buys/sells resp.]
 5. **Inside Mkt-Take** - Send Limit Order at Swipe Factor +/- Best Level2 Displayed Best Bid (for Sells) or Offer (for Buys) –[Aim is to remove liquidity]
 2. Added new values for Swipe factor e.g. 0.06, 0.07, etc
- Inside BBO quotes from the ECNs\Exchange for which book data is available and subscribed is ONLY suppressed once we actually start getting book data for them. E.g. PSE quotes are visible till we start getting ARCA book depth. Once the client gets data for ARCA book, PSE quotes are automatically suppressed
- Cross\Wash prevention logic is not enforced on an existing floating MOC\LOC order.
- Fixed issue with the saving of the “View->Mini Order Entry” setting for each Market Maker window
- Added feature to view floating orders in the Level2 quotes montage. They can be viewed either as aggregated at each price level or displayed individually.
 - To enabled this feature (disabled by default). Go to “Trading Options->Orders in Level2 Wnd (bottom left)
 - Orders can be cancelled by clicking on the ‘red cross’ icon for that displays each sets of orders or individual order in the level2 display.
- Support for BYXX (BATS-Y) exchange
- Fixed bug with entering symbols in Boardview when loading symbols from a layout
- Added formatting for Qty and Exposure columns in the Positions monitor
- Added new Mini OE setup that can be used to control the behavior of the Mini OE window. From main Graybox window, select “Setup->Mini OE”
- Increased the number of symbols that can be saved for the Default Qty list box in Trading Options
- Fixed bug with changing Basket Qty in the Boardview when running in Basket trading mode.
- Spread Protection for Direct Super ECN Key – If a value is set for this via Setup->SuperECNKey, it will not send SuperECNKey orders if the spread of a stock is greater than specified. Setting a value = 0.00 (default), will disable this feature.
- Will use close out “tokens” before auto close outs. In the rare event when no close out token is available, the auto close out will be disabled. A message will ask the trader to close out position manually.

V3.5.0 SP7

11/22/2010

- Fixed a couple of loopholes with self-cross prevention logic

v3.5.0 SP6

11/03/2010

- Added ability to display a flag in the Market maker window, when a stock hits the 10% circuit breaker and the Bid Price test for short sales is enabled for that particular stock (Reg SHO 201)
- Traders on Compliance Mode = 'SHORT ALL' will be able to cover using long positions using long sells for stocks that hit the Bid Price test circuit breaker
- Fixed issue with loading of positions > 100 different symbols
- Removed comma formatting for Positions monitor that was causing some incorrect display of \$PnL column

v3.5.0 SP5

10/28/2010

- Fixed the issue with the display of large Buying Power values in the Summary Section of the Position Monitor
- Alignment issue with the Price field in the Listed Trading window fixed.

v3.5.0 SP4

10/25/2010

- Fixed issue with saving some settings to the database via the logon server
- Improved speed of level 1 update when changing new stocks especially if the stocks are slow moving.
- Added support for BYX (BATS Y exchange) via backup quotes

v3.5.0 SP3

10/20/2010

- Fixed bug with MM Order Entry buttons configuration getting lost on changing symbols
- Added "auto fit" resizing to the Market Clock window

- “Caption” off in the Market Clock window is being saved in the layout.
- Added basic execution support for NQPX and FLOW once its available it the backend
- Added entitlement check for the Desktop API
- Fixed issue with Client status update when GB charts are used from the layout
- Enabled smart opening of multiple connections to the historical database based on the number of charts in a layout. This will reduce unnecessary connections to the historical server for users who do not have charts.
- Fixed bug with Logon server reconnect on certain machines
- Improved efficiency of the Active Orders window by ignoring updates for ‘V’ messages
- A couple of stability issues with GB charts fixed
- Notifier window bug when switching layouts fixed
- Mini OE window – hot key for toggling order types (e.g. limit, market etc) added. (Use Keyboard Config-> Market Maker window tab->Order Entry->Toggle order types)

v3.5.0 SP2

09/29/2010

- Added new hot key to toggle between various ARCA routing modes for the Mini OE and the MM Order Entry windows
 - To configure the hotkey, use KeyMap Config (Marker Maker Window tab) and set the “Mini OE -> Toggle ARCA Routing Mode” hot key to a desired keystroke
- Fixed wrong caption for the ARCA Routing Mode in Trading Options
- Added verbose error description for database related error messages coming from the logon server (so you don’t get the empty message box with the ! mark)
- Switched location of DTTX and CBSX buttons for the Listed Trading window
- Fixed issue with the saving of the bold font in the layout in some machines/OS. This should be backward compatible – however, if the font is not bold – and you saved it as such – just saving the layout will fix it for good.

v3.5.0 SP1

09/21/2010

- Support for CBSX
 - Will allow the GB client to send orders to the CBSX exchange once the backend servers are available
 - Initially support 3 routing types:
 - CSBX DEFAULT – default routing as per the exchange
 - CBSX ONLY – will not route out of CBSX
 - CBSX MPC – will send orders for the CBSX “Mid Point Cross”
- Fixed issue of slow loading of layouts with multiple chart windows with the same symbols
- Fixed issue with connecting to secondary IP addresses when all the primary IPs are not working
- Fixed problem with “Temporary Position Entry” in 64-bit machines
- Bug with “Reset All Secondary Connections” when connected via logon servers fixed.
- Issue with repeat keystroke behavior being disabled when “PAGE UP” or “PAGE DOWN” keys are set for order entry purposes fixed

v3.5.0

09/03/2010

- **New “Time & Sales” window**
 - This window can run linked from the MM window, from the main GB window (linked with the MM window with focus) or unlinked (from the main menu)
 - Automatically starts on live mode
 - Provides historical tick data – going back to 5 days [Backup Quotes->Historical needs to be checked in System Configuration]
 - Provides inside bid/ask changes
 - Allows users to filter by Exchange ID and condition
- **New Mini Order Entry Window**
 - Allows a simple point and click interface for order entry
 - All destinations are available in a single drop down
 - Click on the MM window changes the price, based on where the mouse was clicked
 - Live mode can be toggled to enable live updates as the market changes
 - Hot keys available to set the destination, side of the market, incrementing/decrementing prices, toggling between controls
- **Charts**
 - Zoom in and zoom out functionality – that automatically changes the “show last” functionality
 - Background processing of historical data to speed up data update on changing stocks
 - Throttling in tick charts to prevent CPU usage on data bursts
 - Horizontal and vertical trend lines added
 - Hotkeys added for charts –
 - +/- : zoom in and zoom out
 - 1,2,3...0 – changes the time interval for interval charts (bar, candlestick)
 - Open-Close Candle chart type
 - Optional toolbar with commonly used functions
 - A new color settings menu
 - Optimization for faster historical access
 - The end of the chart made closer to the y-axis as per requests
 - Added ability to set up and down colors for candlestick and bar charts
- **Boardview\Baskets**
 - Linked with MM window (and thus, charts and T&S window as well)
 1. Changing symbol in linked MM window will highlight the symbol in Boardview if the symbol is present
 2. Clicking on a symbol on Boardview will change the symbol in the linked MM window
 - New fields – Change from Open, Change from Open%
 - Single click to edit disabled. Instead, you will need to double click to edit an existing symbol

- New Basket Order Entry window (enable Boardview as a Trading Basket)
 1. Allows users to set TIF for the entire basket – including setting “AT OPEN” TimeInForce value
 2. Can choose most Graybox destinations and order types
 3. Can choose to offset price based on Last price, Close price or inside market (inside bid for sells and inside ask for sells). The offset can be % or absolute value.
- Allows users to select multiple rows in basket and send orders only for those select (use CTRL+MOUSE click to select multiple rows)
- **Order Types**
 - ARCA ALO (Add Liquidity Only) order type added
 - Added ROUQ, INET, IOCT and IOCX as EDGX and EDGX routing modes
 - Added MPM (Mid Point Match) as an EDGX route
 - Bug with EDGX-EDGX & EDGA-EDGA Routing Mode fixed.
 - Added ARCA ALO+MPL as an ARCA route
 - Allow users to configure their routing style for EDGX and EDGA orders (set EDGA and EDGX Routing Styles via Trading Options). Currently available options are 1. Routable (default) 2. Super Aggressive – Cross and Lock 3. Aggressive – Cross Only
- **Full 64-bit compatibility**
 - The users running Windows 7 or Vista 64 bit operating system can use the separate 64-bit installer. The 64-bit version of Graybox will NOT work with a 32-bit operating system. If in doubt, users should use the 32-bit version of Graybox that will run in both 32-bit and 63-bit OS environments.
- **New Market Clock Window**
 - To enable this window, click on “View->Market Clock” from the main menu or context menu
 - Will display the current market time – regardless of the local machine time.
 - Will also display if the market is open or closed
- **New Messages Window**
 - This window has been rewritten for better performance]
 - This can be sorted by time column, ascending or descending
- **New KeymapConfig window**
 - No new functionality – but this has been rewritten for 64 bit compatibility
- **Pref. and Listed Trading window**
 - Added option to “Close On Send”
- **Log file management**
 - All log files will be stored in the “logs” subfolder
 - A maintenance option to “Clean Log Files” has been added that will delete all log files older than 15 calendar days
- **Open Yahoo finance website** via a hot key OR using the MM window context menu
- **Single click access to Web Blotters** – The support for the legacy Blotter application has been removed. Instead, users can click on the Graybox context menu or main menu and click to “Blotter” to automatically open their web blotter.

- **Configurable Level1 Items**

- Users can choose which fields to display and the order in which it is displayed (From the MM window context menu, select Setup->Level1 Quotes->Configure Level1 Items
- Net Change % added as a new field
- **Support for Listed Exchange:** This will allow hot keys to send orders to the correct listing exchange e.g. for NYSE ARCA listed stocks, the primary exchange Market order hot key will send the market order to ARCA and not to NYSE as earlier.
- **System menu** (minimize and max buttons) added to the Messages window, Executions ticker, Market Clock, Positions Monitor, Hedges & Locates Monitor. This will allow users to minimize these window and these will be visible in the windows task bar as separate items. (Also, new icons added for these windows)
- Thermograph removed from the Market Maker window
- BATS Book enabled as default to the Market Maker window (Level2 display)
- Will allow **dynamic loading of BBSS Booths** from the database via the logon server. If the logon server does not have the active list, it will load the default booths (all currently active booths). This will allow us to add new BBSS booths without having to build a new Graybox release.
- Allow **repeat behavior for ARROW keys** (UP, DOWN, LEFT and RIGHT) if they are ONLY assigned to increment or decrement prices. If they are assigned to anything else (check Keyboard Config dialog for details on key assignment), the repeat behavior will be DISABLED.
- A bug with the reconnect logic when one of the primary Marketdata servers goes down has been fixed. This issue could have caused a delay in reconnecting if the user was connected to a secondary setting when the reconnect was issued (and the primary settings were having problems at that time)
- For backup quotes, the channels opened will be based on the user's feed selection via Backup quotes e.g. if the user just wants BATS, only the BATS channel will be opened.
- The loading of pending orders will be based on the server date and not the client date. [**If installing this version during the middle of the trading day and the machine is not set to EST, please do so ONLY if there are no floating orders**]
- Problem with scrolling up and down (using hotkeys or mouse) symbols in the Market Maker Window fixed
- Extra set of SuperECNKey added (the keys need to be using KeyMapconfig and the delta value need to be set using Setup->SuperECNKey)
- Position Dialog summary window now displays all currency fields in the correct format.
- Logon server updates all configuration settings as and when the user makes changes in the front end. This will help in troubleshooting user connectivity issues
- The disconnect timeout for non-functioning logon server reduced to about 12 secs