

ExMode



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User Guide

	Time Filled	Symbol	B/S Qty	Price	Ticket Alias	Exec Level
1	09/20/2013 07:31:26.486330	GX2-3_YEAR	1	100.531565236715	3Y Dirty TED	-147.444
2	09/20/2013 07:31:26.486330	GX2-GE_SEP14	-3	99.5472371948513	3Y Dirty TED	-147.444
3	09/20/2013 07:31:26.486330	GX2-GE_DEC14	-3	99.4302995934487	3Y Dirty TED	-147.444
4	09/20/2013 07:31:26.486330	GX2-GE_SEP15	-2	98.8738717470047	3Y Dirty TED	-147.444
5	09/20/2013 07:31:26.486330	GX2-GE_DEC15	-2	98.6109535439751	3Y Dirty TED	-147.444
6	09/20/2013 07:33:29.962669	GX2-10_YEAR	-6	97.8127569859155	10Y_US	960.63
7	09/20/2013 07:33:29.962669	GX2-ZB_DEC13	31	131.20392778385	10Y_US	960.63



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U.S. Pat. No. 8,341,059 and Patent Pending

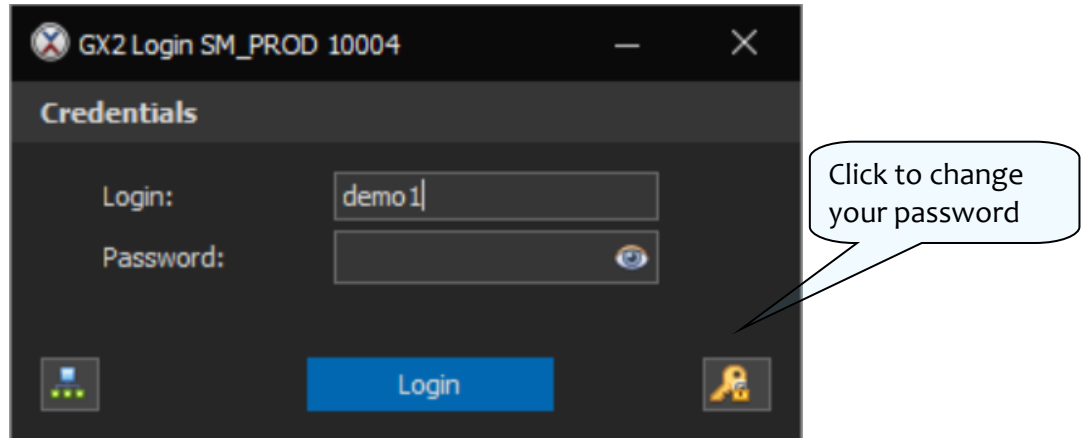
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Login Window

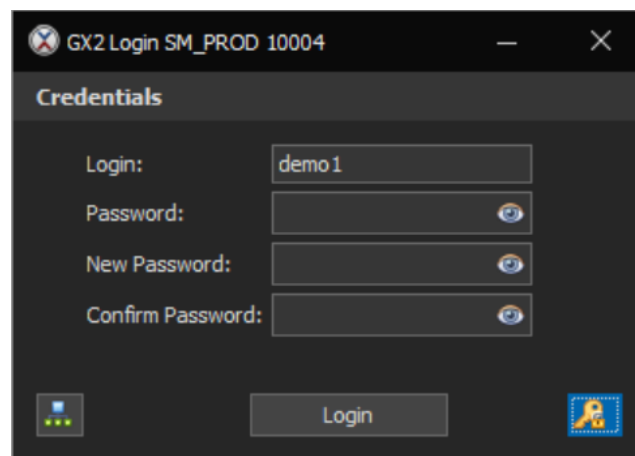


To login to GX2, enter the Login ID and Password provided and click the Login button.

Note: If you enter incorrect information a pop up will appear notifying you of an invalid login.

Changing your password:

Upon clicking the change password button in the lower right of the dialog, 2 new fields will present themselves:



Enter your current password in the Password field and your desired password in both the New Password and Confirm Password fields. Click the Login button to change your password and login to the application.



Spread Orders Window

The Spread Orders window shows all tickets submitted during the trading session.

- ♦ **Ticket ID**: A unique per ticket ID used to reference tickets.
- ♦ **Status**: Displays current status of ticket. Possible statuses include Working, Working STL, On Hold, Canceled, Filled, Filled (X) as well as Unsubmitted and Unknown.
- ♦ **H**: Button used to place ticket on hold or to restart ticket.
- ♦ **M**: Button used to modify the ticket.
- ♦ **X**: Button used to cancel the ticket.
- ♦ **Alias**: Name given to ticket by user.
- ♦ **MKT**: Button that prices the ticket at the current market level and submits the ticket.
- ♦ **Side**: Displays if the ticket is a Buy or a Sell.
- ♦ **Total**: Displays the total quantity needed for product 1 to completely fill the ticket.
- ♦ **--**: Lowers working level.
- ♦ **TKT Level**: Displays current working level. In the case of a Stop Limit ticket it will show the trigger level while the Status is "WORKING STL".
- ♦ **+**: Raises working level.
- ♦ **MKT Level**: Displays current market level.
- ♦ **Mid Level**: Displays the current mid level of the bid/ask spread.
- ♦ **Filled**: Filled quantity of first leg.
- ♦ **Trader**: The trader that the trade was done on behalf of.
- ♦ **MKT Size**: Current market size available for the spread in terms of the first leg .
- ♦ **Auto Cover**: Displays the state of the Auto Cover function. A check means that the function is engaged.
- ♦ **Ticket Level Diff**: The differential used to generate the ticket level of the Auto Cover ticket.
- ♦ **Stop Limit**: A Stop Limit ticket will show the stop limit price in this field.
- ♦ **Stop Trigger Level**: A Stop Limit ticket will show the trigger level in this field.
- ♦ **Account**: The trader account that the ticket was submitted for.
- ♦ **Portfolio ID**: ID assigned by the trader to track performance.
- ♦ **OCO Group ID**: OCO Group that the ticket belongs in. Any ticket that is filled in a group will cancel the other tickets in the group. Right-click a selection of rows to assign tickets to an OCO group.
- ♦ **Type**: Displays the type of ticket that was initially submitted. Possible types are "Stop Limit" and "Limit".
- ♦ **TIF**: Displays the Time In Force for the ticket. Possible values are "Day" and "GTC".
- ♦ **Settle Level**: If the Ticket is a Net Change ticket, this is the level of prior day's settles.



Spread Orders Window (continued)

Creating an OCO group

Tickets that are not completely filled or canceled can be put in OCO groups. A ticket can belong to only one OCO group at a time. To add a group of tickets to an OCO group, select the tickets in the Spread Tickets window (use ctrl+click to select a discontinuous set or shift+click to select a continuous set) then right click and select "Add selected tickets to new OCO group". If one of the tickets selected already belongs to an OCO group you will have the option of adding all the selected tickets to that OCO group or to add them all to a new group. Tickets can also be put into OCO groups via the ticket entry dialog by modifying the ticket and then changing the OCO Group ID dropdown. Only currently working OCO Group IDs will be available in the dropdown.

Spread Orders - SNA01 - 11005 - Workspace-Default.xml

Drag a column header here to group by that column

Alias	Trader	Status	H	M	X	Side	Total	Filled	--	TKT Level	+	MKT Level	MKT Size	MKT	Type	TIF
5Y basis CF	SNA01	WORKING				SELL	1	0	-	101.24	+	100.95	6		Limit	Day
Leg Fill Summaries																
Symbol		Total		Filled												
GX2-5_YEAR				-1		0										
GX2-ZF_JUN16				8		0										
10Y composite	SNA01	WORKING				SELL	6	0	-	-39.731	+	-39.747	6		Limit	Day
5Y_10Y Double BFLY	SNA01	WORKING STL				BUY	4	0	-	7.149	+	6.998	48		Stop Limit	Day
10Y composite	SNA01	WORKING				BUY	6	0	-	-39.748	+	-39.731	24		Limit	Day
5 - 10 - 30 Yld BFLY	SNA01	ON HOLD				BUY	9	0	-	31.05	+	31.42	18		Limit	Day
2 - 10 YC	SNA01	CANCELED				BUY	9	0	-	96.08	+		0		Limit	Day
2 - 30 YC	SNA01	FILLED				SELL	9	9	-	176.14	+		0		Limit	Day
2 - 30 YC	SNA01	FILLED				BUY	9	9	-	176.39	+		0		Limit	Day

Contains([Status], 'WORKING') Or [Status] = 'ON HOLD' Or [Status] = 'UNSUBMITTED' Or [Status] = 'FILLED' Or [Status] = 'CANCELED' Edit Filter



Fast Trade Window

This window allows the user to save multiple tickets for quick and easy trading.

- ♦ **Alias:** Name given to ticket by user.
- ♦ **Buy or Sell TKT:** Opens ticket dialog for any changes the user desires before submitting the ticket.
- ♦ **BUY:** Submits a buy ticket at the current bid level.
- ♦ **Bid Size:** Current bid market size available for the spread in terms of the first leg .
- ♦ **Bid Level:** Current market bid level.
- ♦ **Ask Level:** Current market ask level.
- ♦ **B MKT or S MKT:** Sets the level to the current market.
- ♦ **Ask Size:** Current ask market size available for the spread in terms of the first leg .
- ♦ **SELL:** Submits a sell ticket at the current ask level .
- ♦ **Diff:** Difference between the bid and ask.
- ♦ **Mid Level:** The mid level between the bid and ask.
- ♦ **Type:** Type of ticket saved (e.g., *Stop Limit, Limit*).

Allows user to modify bid level before submission

Allows user to reset the Bid and Ask level to the current market levels

Alias	B TKT	BUY	Bid Size	B-	Bid Level	B+	B MKT	S MKT	S-	Ask Level	S+	Ask Size	SELL	S TKT	Mid Level	Diff	Type
▶ 3Y Butterfly	Buy TKT	BUY	42	-	4.158	+			-	4.168	+	50	SELL	Sell TKT	4.163	0.010	Limit
▶ FV Butterfly	Buy TKT	BUY	265	-	-31.380	+			-	-31.369	+	371	SELL	Sell TKT	-31.375	0.011	Limit
▶ 5yr FLY	Buy TKT	BUY	52	-	8.500	+			-	8.509	+	32	SELL	Sell TKT	8.505	0.009	Limit
▶ TY Butterfly	Buy TKT	BUY	286	-	-10.940	+			-	-10.926	+	286	SELL	Sell TKT	-10.933	0.014	Limit
▶ 10yr FLY	Buy TKT	BUY	43	-	14.002	+			-	14.016	+	60	SELL	Sell TKT	14.009	0.014	Limit
▶ 3Y_5Y Double BFLy	Buy TKT	BUY	39	-	-10.571	+			-	-10.561	+	39	SELL	Sell TKT	-10.566	0.010	Limit
▶ 5Y_10Y Double BFLy	Buy TKT	BUY	48	-	7.257	+			-	7.270	+	30	SELL	Sell TKT	7.264	0.013	Limit
▶ 2y.5y.7y Auction Trade	Buy TKT	BUY	20	-	-75.967	+			-	-75.928	+	5	SELL	Sell TKT	-75.948	0.039	Limit
▶ 5Y composite	Buy TKT	BUY	48	-	-40.056	+			-	-40.046	+	30	SELL	Sell TKT	-40.051	0.010	Limit
▶ 7Y composite	Buy TKT	BUY	40	-	-11.518	+			-	-11.504	+	5	SELL	Sell TKT	-11.511	0.014	Limit
▶ 10Y composite	Buy TKT	BUY	42	-	-27.420	+			-	-27.406	+	54	SELL	Sell TKT	-27.413	0.014	Limit
▶ 3Y Dirty TED	Buy TKT	BUY	42	-	-148.983	+			-	-148.970	+	50	SELL	Sell TKT	-148.977	0.013	Limit
▶ FFYT	Buy TKT	BUY	279	-	35.591	+			-	35.600	+	399	SELL	Sell TKT	35.596	0.009	Limit

Fast Trade Corral

Fast Trade x Energies Equities Yield Spreads Eurex Duration weighted pairs in 32nds

Tabs allow the user to organize tickets for quick and easy access



Fills Window

This window allows the user to view every fill received in the current trading session.

- ♦ **Ticket ID**: A unique per ticket ID used to reference tickets.
- ♦ **Time Filled**: Time the order was filled.
- ♦ **Symbol**: Filled instrument.
- ♦ **Side**: Displays if the order was a Buy or Sell.
- ♦ **Quantity**: Number of contracts filled.
- ♦ **B/S Qty**: Number of contracts filled. A negative number represents a sell order while a positive number represents a buy.
- ♦ **Price**: Price at which the order was filled.
- ♦ **Account**: Displays the account the order was traded on behalf of.
- ♦ **Exec Level**: Executed level of the ticket.
- ♦ **Ticket Alias**: Displays the ticket alias associated with the individual leg fill.
- ♦ **Exchange**: ECN where single order entry order was executed.
- ♦ **Portfolio ID**: ID assigned by the trader to track performance.
- ♦ **Calendar**: Checkbox indicating if the fill is a calendar spread.
- ♦ **Order Id**: Id of the original order. Will show '0' for ticket leg fills. Will show a proper id for single order entry fills.
- ♦ **Fill Id**: Id of the fill. Will show '0' for ticket leg fills. Will show a proper id for single order entry fills.
- ♦ **Originating Spread Side**: Side of the spread that was responsible for the leg fill.
- ♦ **Trader**: The trader that the trade was done on behalf of.

Fills - X2D3 - CHICAGO - DEMO-DEC13.xml

Drag a column header here to group by that column

	Time Filled	Symbol	B/S Qty	Price	Ticket Alias	Exec Level
1	09/20/2013 07:31:26.486330	GX2-3_YEAR	1	100.531565236715	3Y Dirty TED	-147.444
2	09/20/2013 07:31:26.486330	GX2-GE_SEP14	-3	99.5472371948513	3Y Dirty TED	-147.444
3	09/20/2013 07:31:26.486330	GX2-GE_DEC14	-3	99.4302995934487	3Y Dirty TED	-147.444
4	09/20/2013 07:31:26.486330	GX2-GE_SEP15	-2	98.8738717470047	3Y Dirty TED	-147.444
5	09/20/2013 07:31:26.486330	GX2-GE_DEC15	-2	98.6109535439751	3Y Dirty TED	-147.444
6	09/20/2013 07:33:29.962669	GX2-10_YEAR	-6	97.8127569859155	10Y US	960.63
7	09/20/2013 07:33:29.962669	GX2-ZB_DEC13	31	111.120391823917103	3Y Dirty TED	-147.444

TIP: Dragging the Symbol heading to the Group By Box will group all fills by symbol. This will show the user the net position for all filled products as well as the average fill price and the average exec level



Navigator

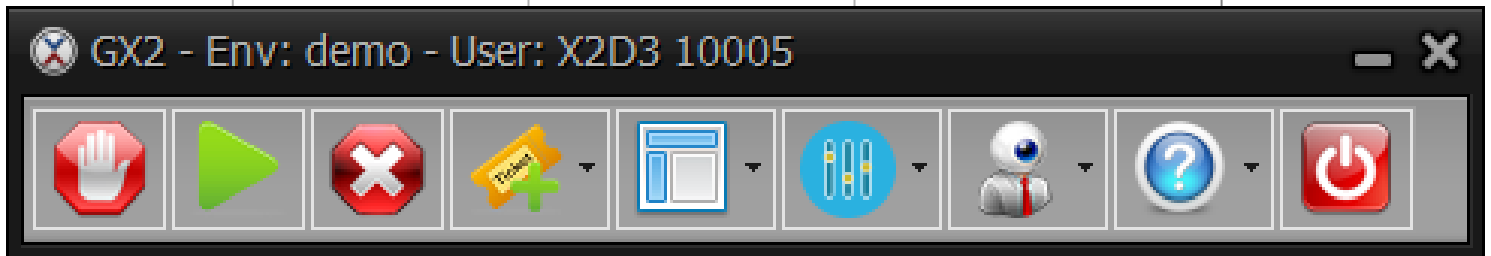
The navigator window gives you complete control of the trading application in a compact window.

Start All:
Starts all working tickets that are on hold

New Ticket: Create a ticket using the Ticket Wizard, CIX Converter, or create a custom ticket. Pre-defined tickets can also be found here.

Settings and Parameters: Access Settings, Futures Implied Yield settings, Settle Data window and Trader Order Size Limits

Help: Links to GX2 Documentation guide, Re-connect, GX2 Support and contact information



Stop All:
Puts all current working tickets on hold

Cancel All:
Cancels all working and held tickets in the tickets window

Workspace Menu:
Allows user to open and save workspaces as well as save and open snapshots, and roll instruments

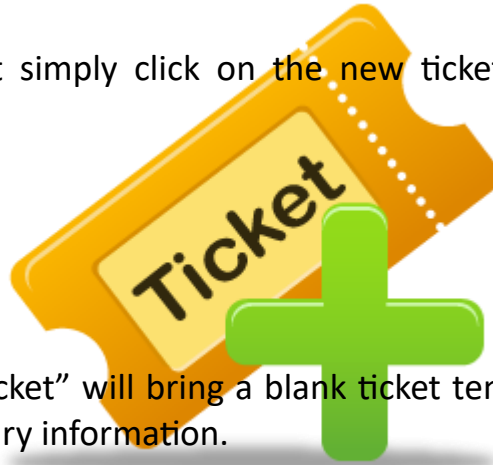
Admin View: If enabled, user can view and control spread orders, outright orders, and strategies of other traders that the user is entitled to see.

Exit: Closes application

Creating A Custom Ticket

Creating a ticket is simple and easy. In a few easy steps you will be able to have a spread set up and ready for trading.

To begin creating a ticket simply click on the new ticket menu icon in the navigator window.



Selecting “New Custom Ticket” will bring a blank ticket template that is ready for you to begin entering the necessary information.

New Ticket

Ticket Options

Alias

Type

Limit

TIF

Day

Trader

SGA03

Level Alarm:

OCO Group ID:

Total Size Limit:

☐ Size in DV01

Net DV01:

☐ AutoCover # 999

Ticket Level Diff:

☐ Add OCO Stop Limit

Stop Trigger Level Diff:

Max Spread:

Limit Level Diff:

☐ Use Decimal Sizes

Slices

Portfolio ID

Add to Fast Trade

Fast Trade

Add

☐ Send email when filled

Ticket Description

Product	Buy/Sell Qty	Factor	Divisor	Total	Bid	Ask	DV01
*							

Levels

Market

Bid Level

Mid Level

Ask Level

Increments

1

Total Size

Settings

Level Calc:

Price

Quote Type:

Level

PP Tick

0.05

☐ Net Yield To Buyer

Tick

0.01

Precision

3

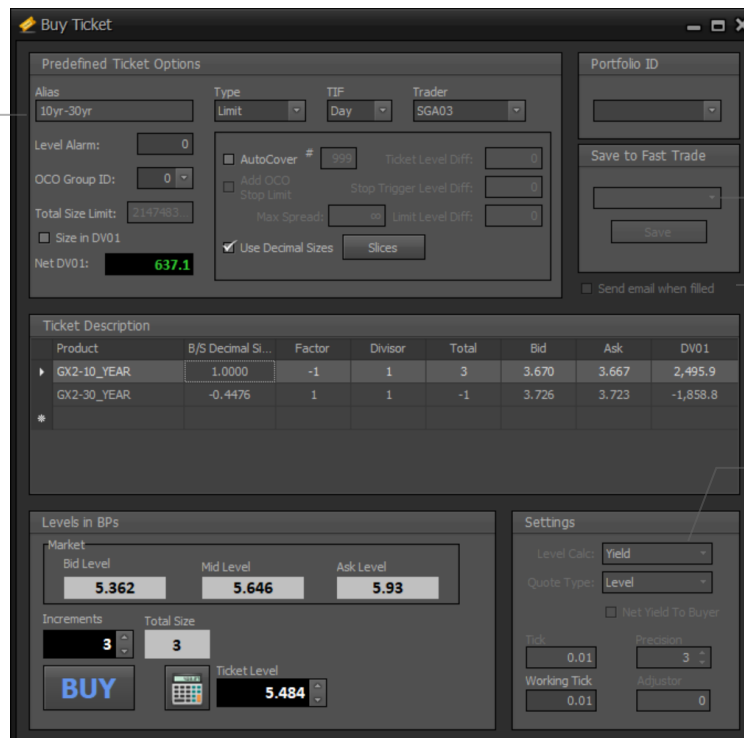
Working Tick

0.01

Adjustor

Creating A Custom Ticket (continued)

- ♦ **Product:** Instrument you would like to trade for that leg of the spread.
- ♦ **Buy/Sell Qty:** Number of contracts you would like to trade. Always assume you are creating a BUY ticket when creating a ticket. A positive increment will represents a bid while a negative increment represents an offer for that product. (Leg Increment multiplied by Number of Increments will give you the total amount to be traded for that ticket).
- ♦ **Factor:** Ratio between products.
- ♦ **Total:** Total number of contracts to complete the ticket. This is the leg increment multiplied by the number of increments.
- ♦ **Bid & Ask:** Current best bid and ask price for that Product.
- ♦ **Tick:** Minimum adjusted increment for a non working ticket.
- ♦ **Working Tick:** Minimum adjusted increment for a working ticket.
- ♦ **Adjustor:** Input a positive or negative number to offset the current market level.
- ♦ **Type:** Type of ticket (e.g., Limit, Stop Limit).
- ♦ **Portfolio ID:** Integer ID assigned by the trader to track performance.
- ♦ **OCO Group ID:** OCO Group that the ticket belongs in. Any ticket that is filled in a group will cancel the other tickets in the group. Selecting 0 will remove the ticket from any OCO group.
- ♦ **TIF:** Sets Time in Force on the ticket. Day tickets are cancelled on disconnect. GTC tickets will be live until the user cancels the ticket. The exception to this rule is for futures that expire or treasury auctions. Auction day CUSIPS are checked in the new session. Any tickets with the old CUSIP will be canceled for the users protection. Note: OCO and Autocover functionality are not allowed on GTC tickets.



Enter a nickname that will make identifying the ticket easy

Ability to select desired tab to save ticket

Email will be sent once ticket is filled if enabled

Types of Level Calc: Price, Yield and 32nd

Product	B/S Decimal SI...	Factor	Divisor	Total	Bid	Ask	DV01
GX2-10_YEAR	1.0000	-1	1	3	3.670	3.667	2,495.9
GX2-30_YEAR	-0.4476	1	1	-1	3.726	3.723	-1,858.8

Creating A Custom Ticket (continued)

- ♦ **Quote Type:** Selecting “Level” calculates the level of the ticket in the standard way. Selecting “Net Change” shows the level as the difference between the current market and the level at the prior day’s settle prices.
- ♦ **Number of Increments:** Number of times you’d like to execute the ticket. In a non-decimally sized ticket, number of increments multiplied by the Buy/Sell Qty will equal the total size for each leg. In a ticket that uses decimal sizes, the number of increments multiplied by the B/S Decimal Size is used to determine the total quantity for each leg.
- ♦ **Net Yield To Buyer:** Checking this box changes the display of yield ticket levels to the net yield to the buyer.
- ♦ **Use Decimal Sizes:** Checking this box will allow the ticket to be defined in terms of theoretic or decimal sizes. This feature can be used to define the ticket in an exact ratio. The total tradable quantity for each leg of the ticket will be the mathematically rounded product of the B/S Decimal Size and the Number of Increments. The total amount of each leg will be automatically “sliced” into more manageable sizes for optimum execution. These slices will minimize the deviation between the actual trade

Ticket Slicer

Number Of Slices: 75

Close

Symbol	Total	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41
GX2-10_YEAR	75	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
GX2-ZN_SEP15	575	8	7	8	8	7	8	8	7	8	8	7	8	8	7	8	8	7	8	8	7	8	8	7	8	8	7	8	8	7	8	8	7	8	8	7	8	8	7	8	8	

size and the theoretic trade size. Due to these quantity deviations some rounding error in the execution level of the spread can exist. Slices will be filled when there is enough liquidity to fill them. If there is enough liquidity to fill all slices simultaneously, all will be filled at once. You can view the slices by clicking the Slices button.

Creating A Custom Ticket (continued)

- ◆ **Level Alarm:** A visual alarm that fires when the difference between the ticket level and the market level is less than or equal to the value in the Level Alarm edit box.
- ◆ **Stop Limit Ticket:** The stop limit ticket will be triggered at the Stop Trigger Level and become a limit ticket at the Limit Level specified. The Limit Level Diff allows the user to use the up/down arrows to adjust the level and maintain the difference between the Stop Trigger Level and the Limit Level. Max Spread is the maximum difference between the market bid ask allowed to trigger the stop. For example, in the event of an economic number where markets may widen temporarily, the stop will not trigger if the bid ask spread is larger than the amount indicated in the Max Spread field. Setting the field to blank or “Infinity” disables this feature.

Ticket Options								Portfolio ID
Alias 5 - 10 - 30 Yld BFLY Decimal	Type Limit	TIF Day	Trader SGA03					
Level Alarm: 0	<input type="checkbox"/> AutoCover # 999 Ticket Level Diff: 0 <input type="checkbox"/> Add OCO Stop Limit Stop Trigger Level Diff: Max Spread: Limit Level Diff:							
OCO Group ID: 0								
Total Size Limit: 2147483...	<input checked="" type="checkbox"/> Use Decimal Sizes Slices							
<input type="checkbox"/> Size in DV01								
Net DV01: -698.3								
Save to Fast Trade								
Save								
<input type="checkbox"/> Send email when filled								

Ticket Description							
Product	B/S Decimal Si...	Factor	Divisor	Total	Bid	Ask	DV01
GX2-10_YEAR	1.0000	-2	1	3	3.671	3.668	2,495.9
GX2-5_YEAR	-0.8889	1	1	-3	3.823	3.822	-1,335.4
GX2-30_YEAR	-0.2220	1	1	-1	3.729	3.726	-1,858.8
*							

Levels in BPs		
Market	Bid Level	Mid Level
	20.48	21.022
		Ask Level
		21.566
Increments	Total Size	
3	3	
BUY	Ticket Level	
	20.776	

Settings	
Level Calc:	Yield
Quote Type:	Level
<input type="checkbox"/> Net Yield To Buyer	
Tick	Precision
0.01	3
Working Tick	Adjustor
0.01	0

Creating A Custom Ticket (continued)

- ♦ **Repeating Auto Cover / Ticket Level Diff** : If AutoCover is engaged, an identical ticket of the opposite side will be submitted when the initial ticket is filled. The level of the "Cover" ticket is the determined by the Ticket Level Diff set on the initial ticket. (e.g., If you're working a buy ticket at the level 100.00 with Auto Cover engaged and a Ticket Level Diff of 1.00, when the buy ticket is filled a Sell ticket will be submitted at the level 101.) This process will continue as many times as designated in the # field. For example, a '2' in this field would result in the ticket entering and exiting the position twice (4 total tickets).
- ♦ **Add OCO Stop Limit**: Checking this box will create a Stop Limit cover ticket as well as the Limit cover ticket mentioned above. The Stop limit ticket will have a trigger level determined by execution level of the initial ticket +/- (depending on side) the Stop Trigger Level Diff specified. The limit level of the ticket will be the stop trigger level +/- the Limit Level Diff. Finally, the Stop Limit ticket will have the Max Spread value specified in the Max Spread field.



Buy Ticket

Ticket Options

Alias: SY_10Y Double BFLY Type: Limit TIF: Day Trader: SGA03

Level Alarm: 0 ☒ AutoCover # 999 Ticket Level Diff: 0.001

OCO Group ID: 0 ☒ Add OCO Stop Limit Stop Trigger Level Diff: 0.5

Total Size Limit: 2147483 Max Spread: 0.3 Limit Level Diff: 0.001

☐ Size in DV01 ☒ Use Decimal Sizes Slices

Net DV01: -199.1

Portfolio ID

Save to Fast Trade

☐ Send email when filled

Ticket Description

Product	B/S Decimal ...	Factor	Divisor	Total	Bid	Ask	DV01
GX2-5_YEAR	1.0000	1	1	4	98.536	98.546	1,780.5
GX2-ZF_MAR23	-4.7500	-4.75	10	-19	108.338	108.343	-825.5
GX2-ZN_MAR23	-0.2500	-0.25	10	-1	113.316	113.323	-66.3
GX2-10_YEAR	-0.5000	-0.5	1	-2	103.678	103.686	-1,664.0
GX2-ZB_MAR23	1.0000	1	10	4	128.225	128.240	576.1

Levels

Market

Bid Level: 0.014 Mid Level: 0.023 Ask Level: 0.033

Increments: 4 Total Size: 4

Ticket Level: 0.015

Settings

Level Calc: Price

Quote Type: Net Change

☐ Net Yield To Buyer

Tick: 0.01 Precision: 3

Working Tick: 0.01 Adjustor: 0



Creating A Custom Ticket (continued)

♦ Level Calculations:

Price: The sign of B/S qty should be the same as the sign of (factor / divisor)

Price Spread Level = Price Leg 1 * (factor 1 / divisor 1) + Price Leg 2 *
(factor 2 / divisor 2) + Price Leg 3 * (factor 3 / divisor 3) + ... Price Leg n *
(factor n / divisor n)

32nds: The sign of B/S qty should be the same as the sign of (factor / divisor)

32nd Spread Level = (Price Leg 1 * (factor 1 / divisor 1) + Price Leg 2 *
(factor 2 / divisor 2) + Price Leg 3 * (factor 3 / divisor 3) + ... Price Leg n *
(factor n / divisor n)) * 32

Yield: The sign of B/S qty must be the OPPOSITE of the sign of (factor / divisor)

Yield Spread Level = Yield Leg 1 * (factor 1 / divisor 1) + Yield Leg 2 *
(factor 2 / divisor 2) + Yield Leg 3 * (factor 3 / divisor 3) + ... Yield Leg n *
(factor n / divisor n)



Creating A Custom Ticket (continued)

Once you have finished making your ticket click the “Add” button to save the ticket to your fast trade window. The ticket is now added to your fast trade window and is able to be traded.

Fast Trade Corral

Alias	B TKT	BUY	Bid Size	B-	Bid Level	B+	B MKT	S MKT	S-	Ask Level	S+	Ask Size	SELL	S TKT	Mid Level	Diff	Type
▶ 3Y Butterfly	Buy TKT	BUY	42	-	4.158	+			-	4.168	+	50	SELL	Sell TKT	4.163	0.010	Limit
▶ FV Butterfly	Buy TKT	BUY	265	-	-31.380	+			-	-31.369	+	371	SELL	Sell TKT	-31.375	0.011	Limit
▶ 5yr FLY	Buy TKT	BUY	52	-	8.500	+			-	8.509	+	32	SELL	Sell TKT	8.505	0.009	Limit
▶ TY Butterfly	Buy TKT	BUY	286	-	-10.940	+			-	-10.926	+	286	SELL	Sell TKT	-10.933	0.014	Limit
▶ 10yr FLY	Buy TKT	BUY	43	-	14.002	+			-	14.016	+	60	SELL	Sell TKT	14.009	0.014	Limit
▶ 3Y_5Y Double BFLy	Buy TKT	BUY	39	-	-10.571	+			-	-10.561	+	39	SELL	Sell TKT	-10.566	0.010	Limit
▶ 5Y_10Y Double BFLy	Buy TKT	BUY	48	-	7.257	+			-	7.270	+	30	SELL	Sell TKT	7.264	0.013	Limit
▶ 2y.5y.7y Auction Trade	Buy TKT	BUY	20	-	-75.967	+			-	-75.928	+	5	SELL	Sell TKT	-75.948	0.039	Limit
▶ 5Y composite	Buy TKT	BUY	48	-	-40.056	+			-	-40.046	+	30	SELL	Sell TKT	-40.051	0.010	Limit
▶ 7Y composite	Buy TKT	BUY	40	-	-11.518	+			-	-11.504	+	5	SELL	Sell TKT	-11.511	0.014	Limit
▶ 10Y composite	Buy TKT	BUY	42	-	-27.420	+			-	-27.406	+	54	SELL	Sell TKT	-27.413	0.014	Limit
▶ 3Y Dirty TED	Buy TKT	BUY	42	-	-148.983	+			-	-148.970	+	50	SELL	Sell TKT	-148.977	0.013	Limit
▶ FFYT	Buy TKT	BUY	279	-	35.591	+			-	35.600	+	399	SELL	Sell TKT	35.596	0.009	Limit

Fast Trade

Energies

Equities

Yield Spreads

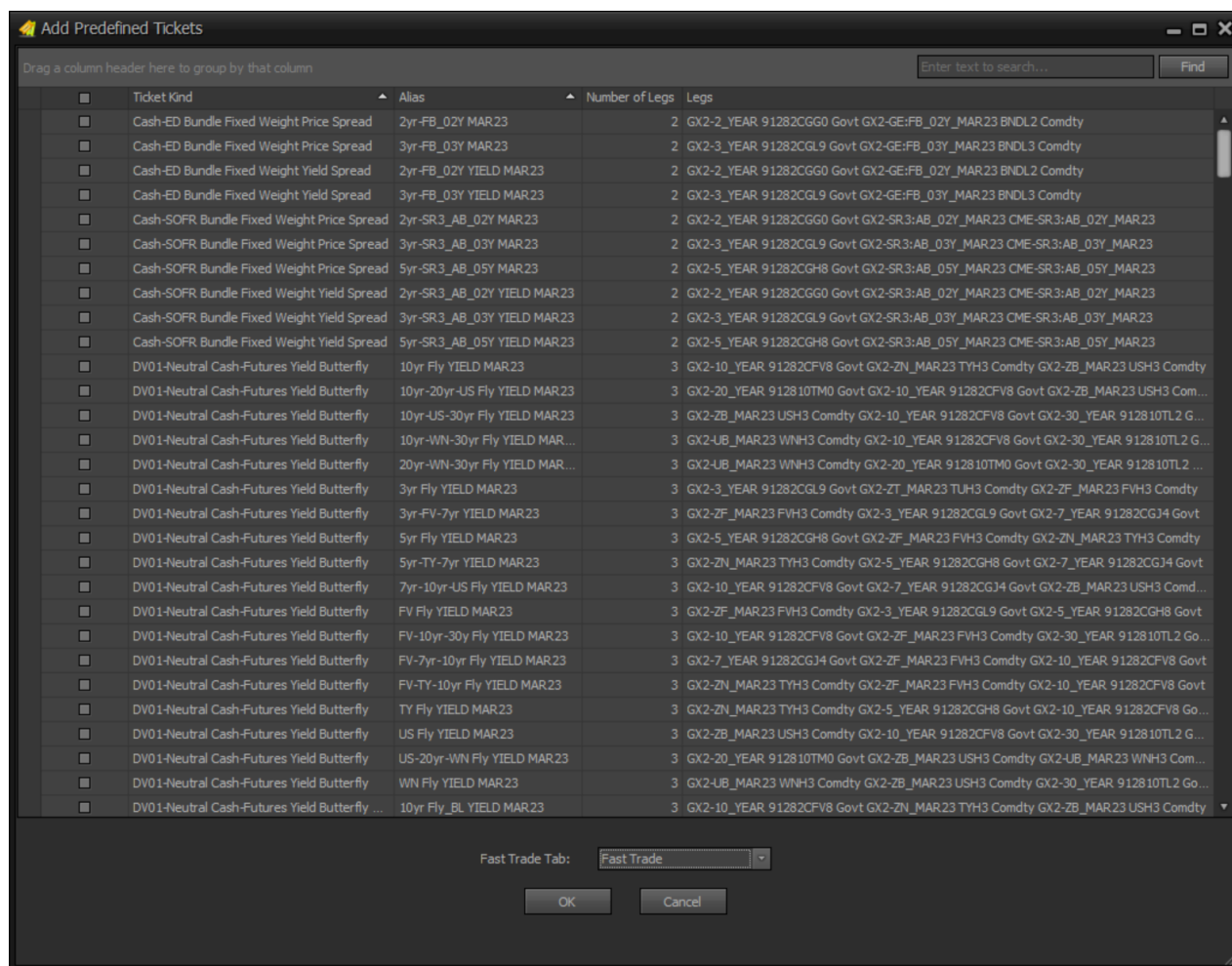
Eurex

Duration weighted pairs in 32nds

Creating A Predefined Ticket

GX2 offers DV01 weighted, predefined tickets that can be selected from the New Tickets Menu by clicking the Predefined Tickets menu item.

Select the predefined tickets that you would like to import into your workspace and specify they Fast Trade Tab that you would like to import them to.



Yield based predefined tickets reweight automatically to prior Days DV01 each time the workspace is opened. For Price and 32nd tickets, the trader can then reweight the predefined tickets by clicking the Reweight Legs button at the bottom of the ticket. The Reweight Legs button is only available when modifying a predefined ticket from the Fast Trade window.

Note: Predefined tickets default to a ticket increment size of 0. The trader will have to set the ticket increment before entering the order into the system.

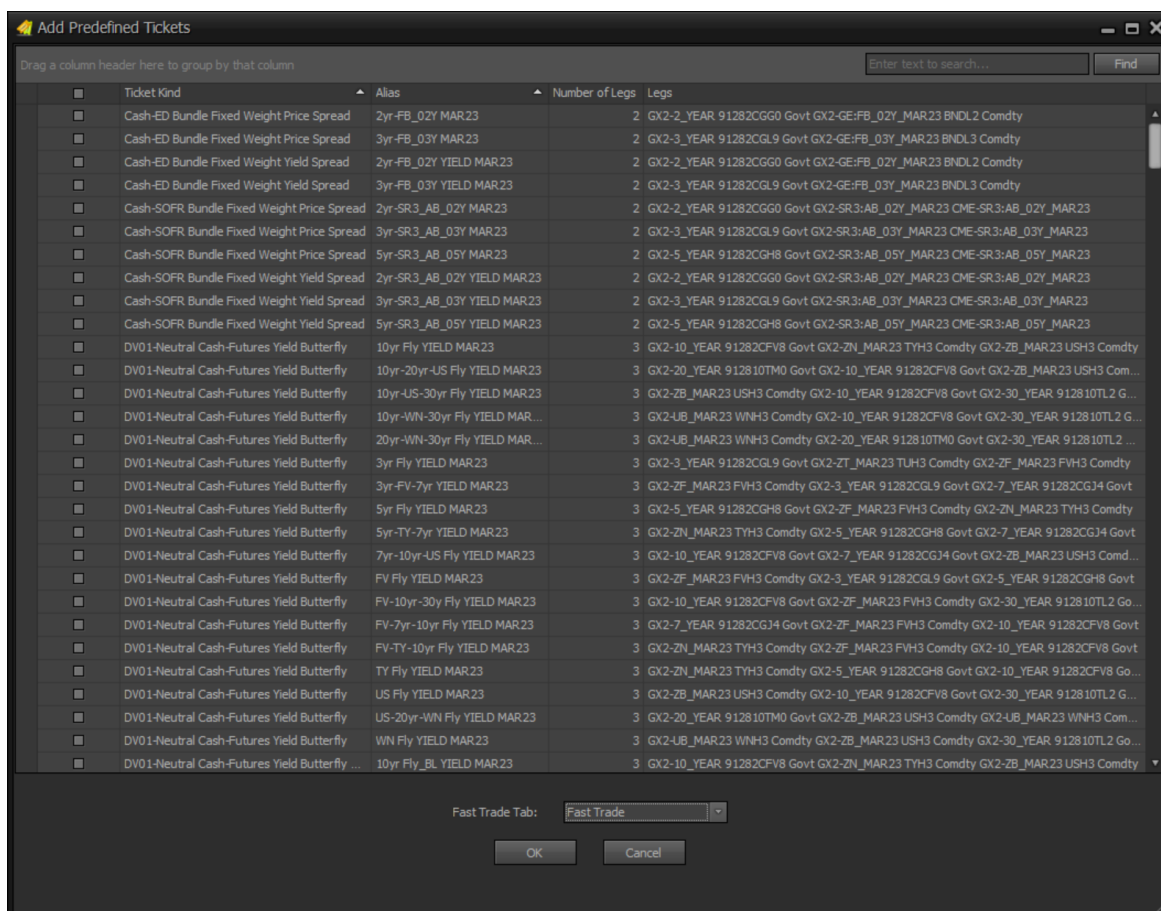
Creating A Predefined Ticket (continued)

Alias Definitions:

SL— The SL Suffix on a DV01-Neutral Yield Spread Steepener Long End Predefined Ticket represents a curve trade that is expressed as a Steepener (buying shorter duration leg and selling longer duration leg) when buying the overall strategy with sizing using the longer duration tenor. The opposite is true when selling the overall strategy.

FL—The FL suffix on a DV01-Neutral Yield Spread Flatteners Long End Predefined Ticket represents a curve that is expressed as a Flatteners (buying longer duration leg and selling shorter duration leg) when buying the over strategy with sizing using the longer duration tenor. The opposite is true when selling the overall strategy.

BL—The BL suffix on a DV01-Neutral Yield Butterfly Reversed Predefined Ticket represents a Butterfly that is expressed as buying the legs of the strategy while selling the belly when buying the overall strategy.



Ticket Kind	Alias	Number of Legs	Legs
Cash-ED Bundle Fixed Weight Price Spread	2yr-FB_02Y MAR23	2	GX2-2_YEAR 91282CGG0 Govt GX2-GE:FB_02Y_MAR23 BNDL2 Comdty
Cash-ED Bundle Fixed Weight Price Spread	3yr-FB_03Y MAR23	2	GX2-3_YEAR 91282CGL9 Govt GX2-GE:FB_03Y_MAR23 BNDL3 Comdty
Cash-ED Bundle Fixed Weight Yield Spread	2yr-FB_02Y YIELD MAR23	2	GX2-2_YEAR 91282CGG0 Govt GX2-GE:FB_02Y_MAR23 BNDL2 Comdty
Cash-ED Bundle Fixed Weight Yield Spread	3yr-FB_03Y YIELD MAR23	2	GX2-3_YEAR 91282CGL9 Govt GX2-GE:FB_03Y_MAR23 BNDL3 Comdty
Cash-SOFR Bundle Fixed Weight Price Spread	2yr-SR3_AB_02Y MAR23	2	GX2-2_YEAR 91282CGG0 Govt GX2-SR3:AB_02Y_MAR23 CME-SR3:AB_02Y_MAR23
Cash-SOFR Bundle Fixed Weight Price Spread	3yr-SR3_AB_03Y MAR23	2	GX2-3_YEAR 91282CGL9 Govt GX2-SR3:AB_03Y_MAR23 CME-SR3:AB_03Y_MAR23
Cash-SOFR Bundle Fixed Weight Price Spread	5yr-SR3_AB_05Y MAR23	2	GX2-5_YEAR 91282CGH8 Govt GX2-SR3:AB_05Y_MAR23 CME-SR3:AB_05Y_MAR23
Cash-SOFR Bundle Fixed Weight Yield Spread	2yr-SR3_AB_02Y YIELD MAR23	2	GX2-2_YEAR 91282CGG0 Govt GX2-SR3:AB_02Y_MAR23 CME-SR3:AB_02Y_MAR23
Cash-SOFR Bundle Fixed Weight Yield Spread	3yr-SR3_AB_03Y YIELD MAR23	2	GX2-3_YEAR 91282CGL9 Govt GX2-SR3:AB_03Y_MAR23 CME-SR3:AB_03Y_MAR23
Cash-SOFR Bundle Fixed Weight Yield Spread	5yr-SR3_AB_05Y YIELD MAR23	2	GX2-5_YEAR 91282CGH8 Govt GX2-SR3:AB_05Y_MAR23 CME-SR3:AB_05Y_MAR23
DV01-Neutral Cash-Futures Yield Butterfly	10yr Fly YIELD MAR23	3	GX2-10_YEAR 91282CFV8 Govt GX2-ZN_MAR23 TYH3 Comdty GX2-ZB_MAR23 USH3 Comdty
DV01-Neutral Cash-Futures Yield Butterfly	10yr-20yr-US Fly YIELD MAR23	3	GX2-20_YEAR 912810TMO Govt GX2-10_YEAR 91282CFV8 Govt GX2-ZB_MAR23 USH3 Com...
DV01-Neutral Cash-Futures Yield Butterfly	10yr-US-30yr Fly YIELD MAR23	3	GX2-ZB_MAR23 USH3 Comdty GX2-10_YEAR 91282CFV8 Govt GX2-30_YEAR 912810TL2 G...
DV01-Neutral Cash-Futures Yield Butterfly	10yr-WN-30yr Fly YIELD MAR...	3	GX2-UB_MAR23 WNH3 Comdty GX2-10_YEAR 91282CFV8 Govt GX2-30_YEAR 912810TL2 G...
DV01-Neutral Cash-Futures Yield Butterfly	20yr-WN-30yr Fly YIELD MAR...	3	GX2-UB_MAR23 WNH3 Comdty GX2-20_YEAR 912810TMO Govt GX2-30_YEAR 912810TL2 ...
DV01-Neutral Cash-Futures Yield Butterfly	3yr Fly YIELD MAR23	3	GX2-3_YEAR 91282CGL9 Govt GX2-ZT_MAR23 TYH3 Comdty GX2-ZF_MAR23 FVH3 Comdty
DV01-Neutral Cash-Futures Yield Butterfly	3yr-FV-7yr YIELD MAR23	3	GX2-ZF_MAR23 FVH3 Comdty GX2-3_YEAR 91282CGL9 Govt GX2-7_YEAR 91282CGJ4 Govt
DV01-Neutral Cash-Futures Yield Butterfly	5yr Fly YIELD MAR23	3	GX2-5_YEAR 91282CGH8 Govt GX2-ZF_MAR23 FVH3 Comdty GX2-ZN_MAR23 TYH3 Comdty
DV01-Neutral Cash-Futures Yield Butterfly	5yr-TY-7yr YIELD MAR23	3	GX2-ZN_MAR23 TYH3 Comdty GX2-5_YEAR 91282CGH8 Govt GX2-7_YEAR 91282CGJ4 Govt
DV01-Neutral Cash-Futures Yield Butterfly	7yr-10yr-US Fly YIELD MAR23	3	GX2-10_YEAR 91282CFV8 Govt GX2-7_YEAR 91282CGJ4 Govt GX2-ZB_MAR23 USH3 Comd...
DV01-Neutral Cash-Futures Yield Butterfly	FV Fly YIELD MAR23	3	GX2-ZF_MAR23 FVH3 Comdty GX2-3_YEAR 91282CGL9 Govt GX2-5_YEAR 91282CGH8 Govt
DV01-Neutral Cash-Futures Yield Butterfly	FV-10yr-30yr Fly YIELD MAR23	3	GX2-10_YEAR 91282CFV8 Govt GX2-ZF_MAR23 FVH3 Comdty GX2-30_YEAR 912810TL2 Go...
DV01-Neutral Cash-Futures Yield Butterfly	FV-7yr-10yr Fly YIELD MAR23	3	GX2-7_YEAR 91282CGJ4 Govt GX2-ZF_MAR23 FVH3 Comdty GX2-10_YEAR 91282CFV8 Govt
DV01-Neutral Cash-Futures Yield Butterfly	FV-TY-10yr Fly YIELD MAR23	3	GX2-ZN_MAR23 TYH3 Comdty GX2-ZF_MAR23 FVH3 Comdty GX2-10_YEAR 91282CFV8 Govt
DV01-Neutral Cash-Futures Yield Butterfly	TY Fly YIELD MAR23	3	GX2-ZN_MAR23 TYH3 Comdty GX2-5_YEAR 91282CGH8 Govt GX2-10_YEAR 91282CFV8 Go...
DV01-Neutral Cash-Futures Yield Butterfly	US Fly YIELD MAR23	3	GX2-ZB_MAR23 USH3 Comdty GX2-10_YEAR 91282CFV8 Govt GX2-30_YEAR 912810TL2 G...
DV01-Neutral Cash-Futures Yield Butterfly	US-20yr-WN Fly YIELD MAR23	3	GX2-20_YEAR 912810TMO Govt GX2-ZB_MAR23 USH3 Comdty GX2-UB_MAR23 WNH3 Com...
DV01-Neutral Cash-Futures Yield Butterfly	WN Fly YIELD MAR23	3	GX2-UB_MAR23 WNH3 Comdty GX2-ZB_MAR23 USH3 Comdty GX2-30_YEAR 912810TL2 Go...
DV01-Neutral Cash-Futures Yield Butterfly ...	10yr Fly BL YIELD MAR23	3	GX2-10_YEAR 91282CFV8 Govt GX2-ZN_MAR23 TYH3 Comdty GX2-ZB_MAR23 USH3 Comdty

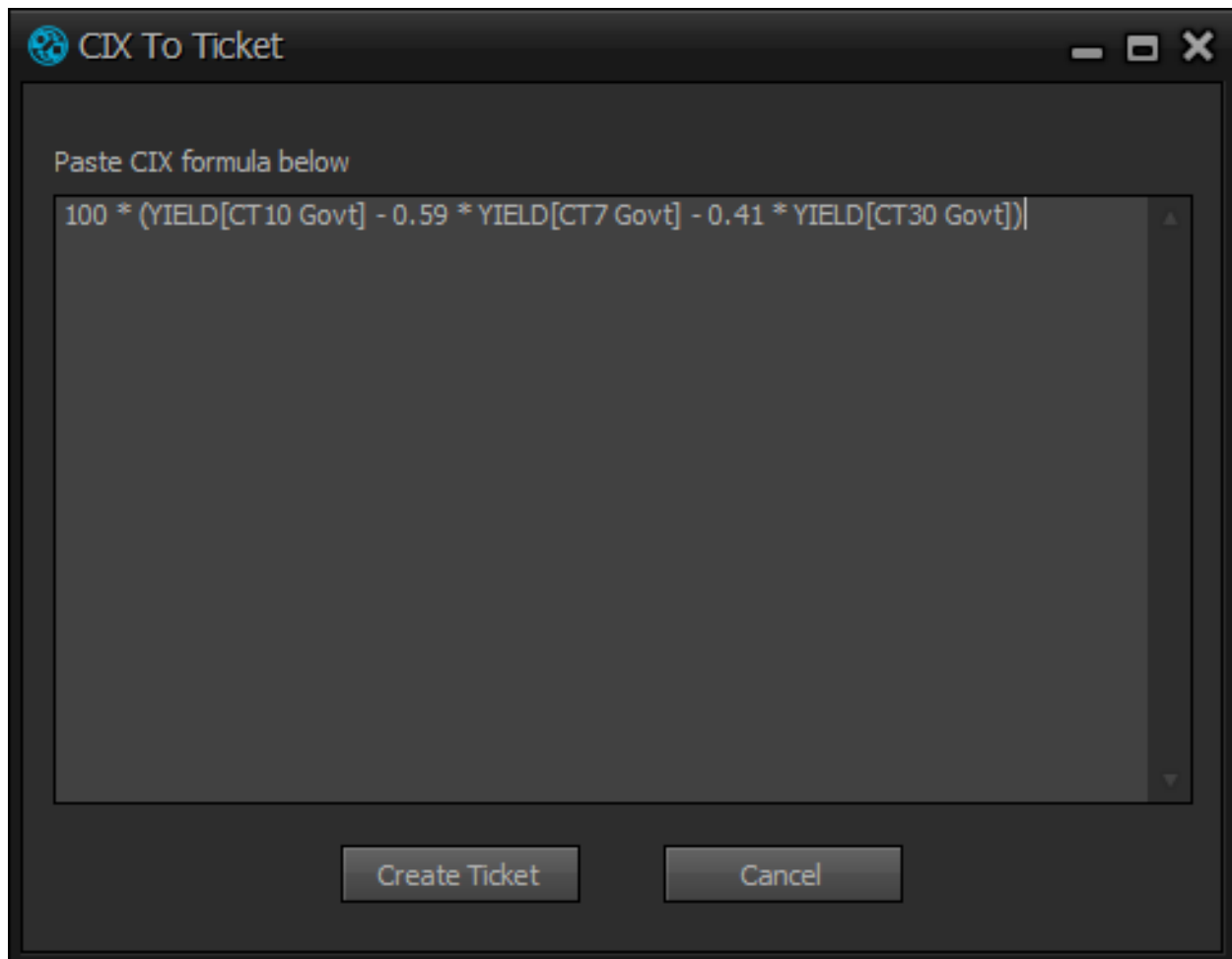
Fast Trade Tab: Fast Trade

OK Cancel



CIX Converter:

Clients can now copy and paste their favorite trading strategies from their Bloomberg CIX Library directly into GX2's CIX Converter. The CIX converter will seamlessly create a GX2 ticket that reflects the CIX trading strategy.





Ticket Wizard:

Allows traders to **create a ticket with only the total size of each leg as the inputs**. The Ticket Wizard will automatically create tickets with appropriate factors and divisors and intelligently slice your ticket for optimal execution within the GX2 system. The Ticket Wizard is available from the Ticket menu of the navigator bar.

The screenshot shows the 'Ticket Wizard' window with a table containing two legs. The first leg is 'GX2-10_YEAR' with a quantity of 1. The second leg is 'GX2-ZN_MAR23' with a quantity of -12. Below the table, there is a 'Level Calc:' dropdown set to 'Price', a 'Legging Spreader' checkbox, and a 'Create Ticket' button.

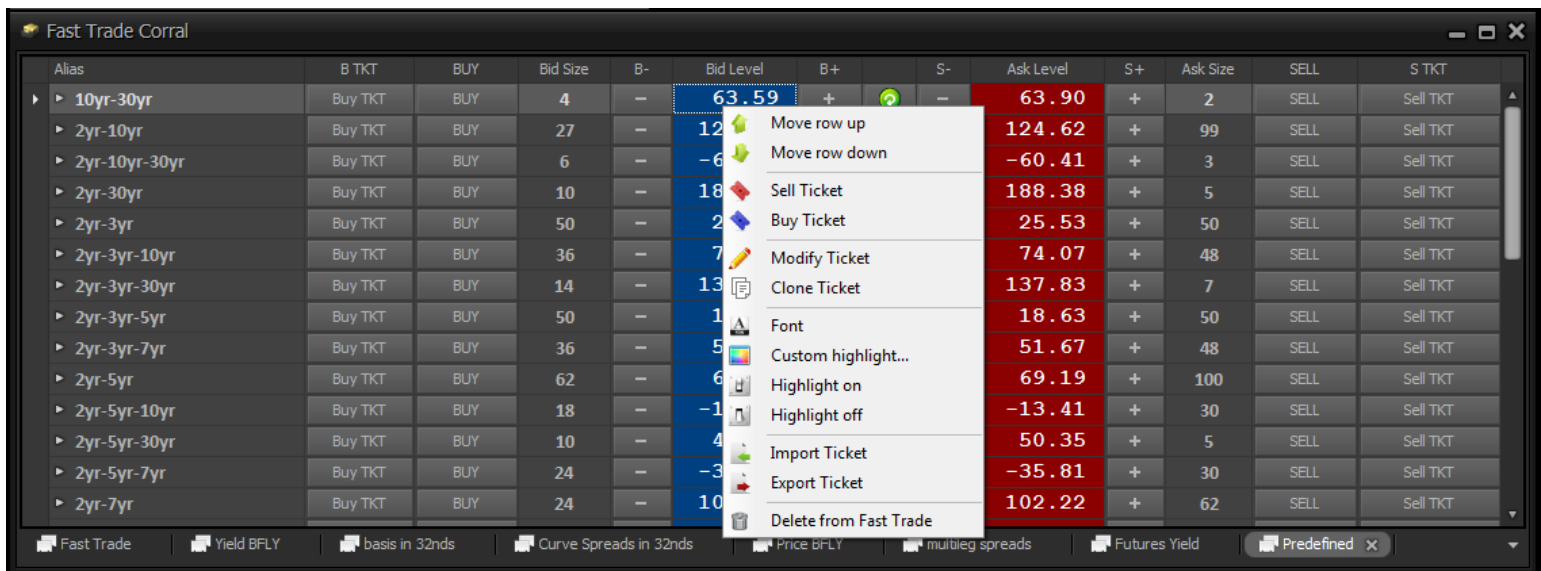
Leg	Product	Total B/S Qty
1	GX2-10_YEAR	1
2	GX2-ZN_MAR23	-12

Level Calc: Price ☐ Legging Spreader

Fast Trade Corral Menu

Right Clicking on a specific ticket in the Fast Trade Corral will bring up a list of options.

- ♦ **Move row up/down**: This will move the position of a ticket in the Fast Trade Corral.
- ♦ **Sell/Buy Ticket**: Submits a ticket at the current Bid or Ask level.
- ♦ **Modify Ticket**: Allows the user to make changes to the ticket.
- ♦ **Clone Ticket**: Creates a duplicate ticket.
- ♦ **Font**: Opens a dialog where the font of the grid can be changed. All fonts can be restored to the original fonts from Settings & Parameters Menu->Settings->Options.
- ♦ **Custom highlight...**: Allows the user to select a custom color to highlight a row.
- ♦ **Highlight on**: Highlights the selected row with the custom highlight chosen.
- ♦ **Highlight off**: Removes the highlight from the row.
- ♦ **Import/Export Ticket**: Export and import individual tickets.
- ♦ **Delete from Fast Trade**: Removes ticket from Fast Trade Corral.



The screenshot shows the 'Fast Trade Corral' window with a table of tickets. A right-click context menu is open over the first row (10yr-30yr). The menu options are: Move row up, Move row down, Sell Ticket, Buy Ticket, Modify Ticket, Clone Ticket, Font, Custom highlight..., Highlight on, Highlight off, Import Ticket, Export Ticket, and Delete from Fast Trade.

Alias	B TKT	BUY	Bid Size	B-	Bid Level	B+	S-	Ask Level	S+	Ask Size	SELL	S TKT
10yr-30yr	Buy TKT	BUY	4	-	63.59	+	-	63.90	+	2	SELL	Sell TKT
2yr-10yr	Buy TKT	BUY	27	-	12	+	-	124.62	+	99	SELL	Sell TKT
2yr-10yr-30yr	Buy TKT	BUY	6	-	-6	+	-	-60.41	+	3	SELL	Sell TKT
2yr-30yr	Buy TKT	BUY	10	-	18	+	-	188.38	+	5	SELL	Sell TKT
2yr-3yr	Buy TKT	BUY	50	-	2	+	-	25.53	+	50	SELL	Sell TKT
2yr-3yr-10yr	Buy TKT	BUY	36	-	7	+	-	74.07	+	48	SELL	Sell TKT
2yr-3yr-30yr	Buy TKT	BUY	14	-	13	+	-	137.83	+	7	SELL	Sell TKT
2yr-3yr-5yr	Buy TKT	BUY	50	-	1	+	-	18.63	+	50	SELL	Sell TKT
2yr-3yr-7yr	Buy TKT	BUY	36	-	5	+	-	51.67	+	48	SELL	Sell TKT
2yr-5yr	Buy TKT	BUY	62	-	6	+	-	69.19	+	100	SELL	Sell TKT
2yr-5yr-10yr	Buy TKT	BUY	18	-	-1	+	-	-13.41	+	30	SELL	Sell TKT
2yr-5yr-30yr	Buy TKT	BUY	10	-	4	+	-	50.35	+	5	SELL	Sell TKT
2yr-5yr-7yr	Buy TKT	BUY	24	-	-3	+	-	-35.81	+	30	SELL	Sell TKT
2yr-7yr	Buy TKT	BUY	24	-	10	+	-	102.22	+	62	SELL	Sell TKT

Agency Unhedged Position Limit

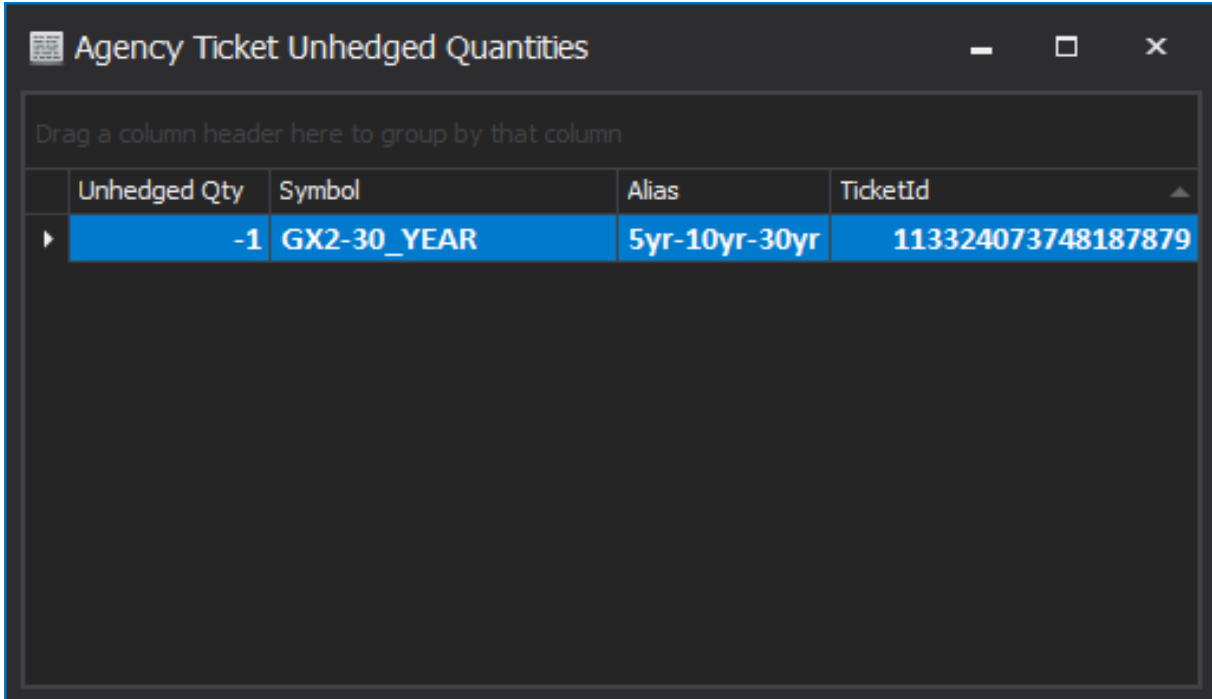
Allows agency traders to limit their exposure by setting an unhedged limit per product. Entering a limit for the product master will limit your exposure for all expirations of that product. If you would like to limit your unhedged exposure for a specific expiration click the + to expand the row and set the limit for the desired expiration. The product will be highlighted green if an underlying expiration has a limit set.

Agency Unhedged Position Limit		
Drag a column header here to group by that column		
Product Master	Trader	Limit
10_YEAR	SA011	25
2_YEAR	SA011	
3_YEAR	SA011	
30_YEAR	SA011	
5_YEAR	SA011	
6A	SA011	
6B	SA011	
6C	SA011	
6E	SA011	
6J	SA011	
6N	SA011	
6S	SA011	
7_YEAR	SA011	
BZ	SA011	
Agency Unhedged Product Limits		
Drag a column header here to group by that column		
Product	Limit	
<div> <div></div> <div>GX2-BZ_OCT19</div> </div> <div> <div></div> <div>GX2-BZ_SEP19</div> </div>	5	
CBT-LIC	SA011	
CBT-LID	SA011	
CBT-LIE	SA011	
CBT-LIT	SA011	
CBT-LIW	SA011	
CBT-LIY	SA011	
CL	SA011	
CL_SPRD	SA011	



Agency Ticket Unhedged Quantities

Allows agency traders to view their current exposure in real time. The window displays the quantity currently working in the market, the symbol, the spread alias associated with the order, and finally the ticket ID associated with the unhedged position.



Drag a column header here to group by that column				
	Unhedged Qty	Symbol	Alias	TicketId
▶	-1	GX2-30_YEAR	5yr-10yr-30yr	113324073748187879

Futures Implied Yields

The implied yield of a specific futures is calculated as the yield of the cheapest to deliver (CTD) bond based on its conventional method. In Bloomberg, this value is available as "FUT_CTD_CNV_YLD". This implied yield level is calculated by establishing the gross basis relationship between the CTD and the future contract and mapping the yield levels of the CTD to the future.

Please see "The Treasury Bond Basis" for further detail.

Burghardt, Galen, T. M. Belton, M. Lane, and J. Papa. "The Treasury Bond Basis-An In-Depth Analysis for Hedgers." Speculators and Arbitrageurs, -IRWIN Professional Publishing, Chicago (1994).

The Futures Implied Yield Price Definition window is used to define the parameters for calculating implied yield. This window can be opened via the Navigator by clicking on the Workspace Menu and selecting Futures Implied Yield Parameters.

Futures Implied Yield Price Definition											
Futures Symbol	Bloomberg Symbol	Delivery Date	Cheapest To Deliver	Yield Type	Calc Type	Gross Basis (32nds)	Net Basis (32nds)	Actual Repo %	Implied Repo %	Futures Price	Submit
GX2-TN_JUN20	UXYM0 Comdty	6/30/2020	1.750_11/15/29_912828Y53	Conventional	Gross Basis	12.3633					Submit
GX2-TN_MAR20	UXYH0 Comdty	3/31/2020	1.625_08/15/29_912828Y80	Conventional	Net Basis	1.9747	0.0000	0.495		144-15+	Submit
GX2-UB_JUN20	WNM0 Comdty	6/30/2020	2.875_08/15/45_912810RN0	CF Forward Yield		0.0000					Submit
GX2-UB_MAR20	WNH0 Comdty	3/31/2020	3.000_05/15/45_912810RM2	Forward Yield	Implied Repo	4.0344		0.495	0.500	225-14	Submit
GX2-ZB_JUN20	USM0 Comdty	6/30/2020	4.500_02/15/36_912810FT0	CF Forward Yield		0.0000					Submit
GX2-ZB_MAR20	USH0 Comdty	3/31/2020	4.500_02/15/36_912810FT0	Forward Yield							Submit
GX2-ZF_JUN20	UXYM0 Comdty	7/15/2020	1.250_08/31/24_912828YE4	CF Forward Yield		0.0000					Submit
GX2-ZF_MAR20	UXYM0 Comdty	5/15/2020	2.000_05/31/24_912828XT2	CF Forward Yield		0.0000					Submit
GX2-ZN_JUN20	UXYM0 Comdty	6/30/2020	2.250_02/15/27_912828V98	CF Forward Yield		0.0000					Submit
GX2-ZN_MAR20	UXYM0 Comdty	3/31/2020	2.000_11/15/26_912828U24	CF Forward Yield		0.0000					Submit
GX2-ZT_JUN20	UXYM0 Comdty	6/30/2020	1.875_03/31/22_912828W89	CF Forward Yield		0.0000					Submit
GX2-ZT_MAR20	UXYM0 Comdty	3/31/2020	2.000_12/31/21_912828U81	CF Forward Yield		0.0000					Submit

Traders may choose from three Yield types for futures:

- ♦ **Conventional** – The original method used in GX2. This method calculates the YTM on the current settlement date of the Spot Price, where Spot Price = CF * Futures Price + Gross basis. This method replicates FUT_CTD_CNV_YLD.
- ♦ **CF Forward Yield** – This method calculates YTM of the forward price on the last delivery date of the contract, where Forward Price = Conversion Factor * Futures Price. This method replicates CTD_FORWARD_YTM.
- ♦ **Forward Yield** – This method calculates the YTM of the forward price on the last delivery date of the contract where, Forward Price = Spot Price – Carry and Spot Price = CF * Futures Price + Gross basis.



Futures Implied Yields (continued)

There are three calculation types that can be used to define Gross Basis:

- ♦ **Gross Basis**: Trader can select a Cheapest To Deliver bond, the Delivery Date, and directly enter the Gross Basis in 32nds that they wish to use.
- ♦ **Implied Repo**: Trader can select a Cheapest To Deliver bond, the Delivery Date, enter the Implied Repo % and a Futures Price to calculate the Gross Basis.
- ♦ **Net Basis**: Trader can select a Cheapest To Deliver bond, the Delivery Date, enter the Actual Repo %, Net Basis in 32nds, and a Futures Price to calculate the Gross Basis.

After selecting a calculation type, the fields that are mandatory are highlighted in yellow. Once the definition is submitted successfully (either by clicking the Submit button on the row or by clicking Submit All in the context menu) the fields will turn green and yield prices will be calculated for the submitted future in any yield tickets that contain that future. Note, if a parameter is changed yield prices will not be calculated on the trading client for that future and levels for any ticket containing the future will show 'NaN' until the yield definition has been resubmitted successfully. Any working tickets will continue to work with the previous yield definition while the trader modifies the yield definition at the trading client. Once the trader submits the definition the working ticket will be priced with the new yield definition.

Single Fast Trade Corral

The Single Fast Trade Corral allows the user to add outright instruments to their workspace for single order entry directly to the exchange. To add a product simply select the instrument you would like to trade from the dropdown and click “Quick Add.” If you would like to add multiple instruments simply select “Manage Instruments.”

Cancel All Button: Cancels all single orders that you have entered.

Quick Order Entry: Shows/hides the order entry panel of the window.

Price: Price for the instrument selected in the grid. You can use up/down arrows to change the price. Holding the ctrl key and pressing the up/down arrows will change the Size.

Size: Quantity for the order.

Buy Button: Submit a buy order for the instrument, price and size chosen.

Sell Button: Submit a sell order for the instrument, price and size chosen.

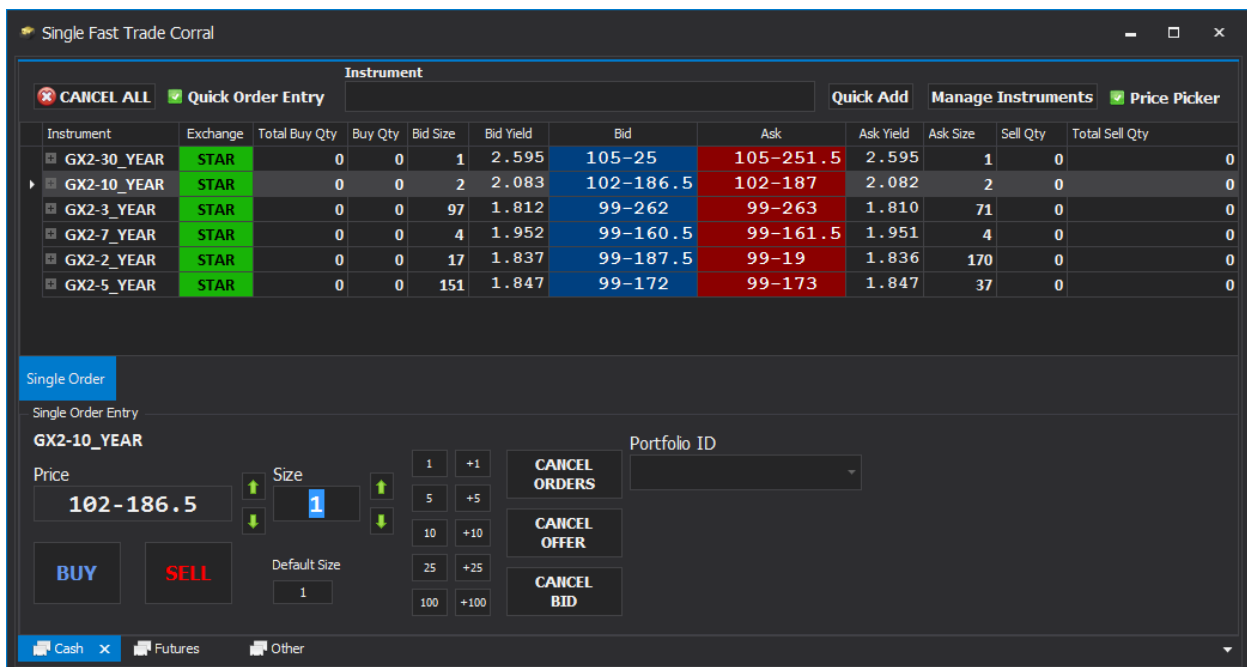
Default Size: User can set the default size that will be used when the instrument is selected. This default size is also used in the order entry dialog and for Hit/Lift.

Cancel Orders Button: Cancels all orders for the instrument selected.

Cancel Offer Button: Cancels orders at the best price you are currently offering.

Cancel Bid Button: Cancels orders at the best price you are currently bidding.

Note: Keyboard shortcuts can be set for the actions in the order entry section from the Settings dialog in the Workspace Menu of the Navigator bar. You can assign a keyboard shortcut to an instrument/side from the order entry settings. Right-click on an instrument in the grid and select ‘Order Entry Settings’.



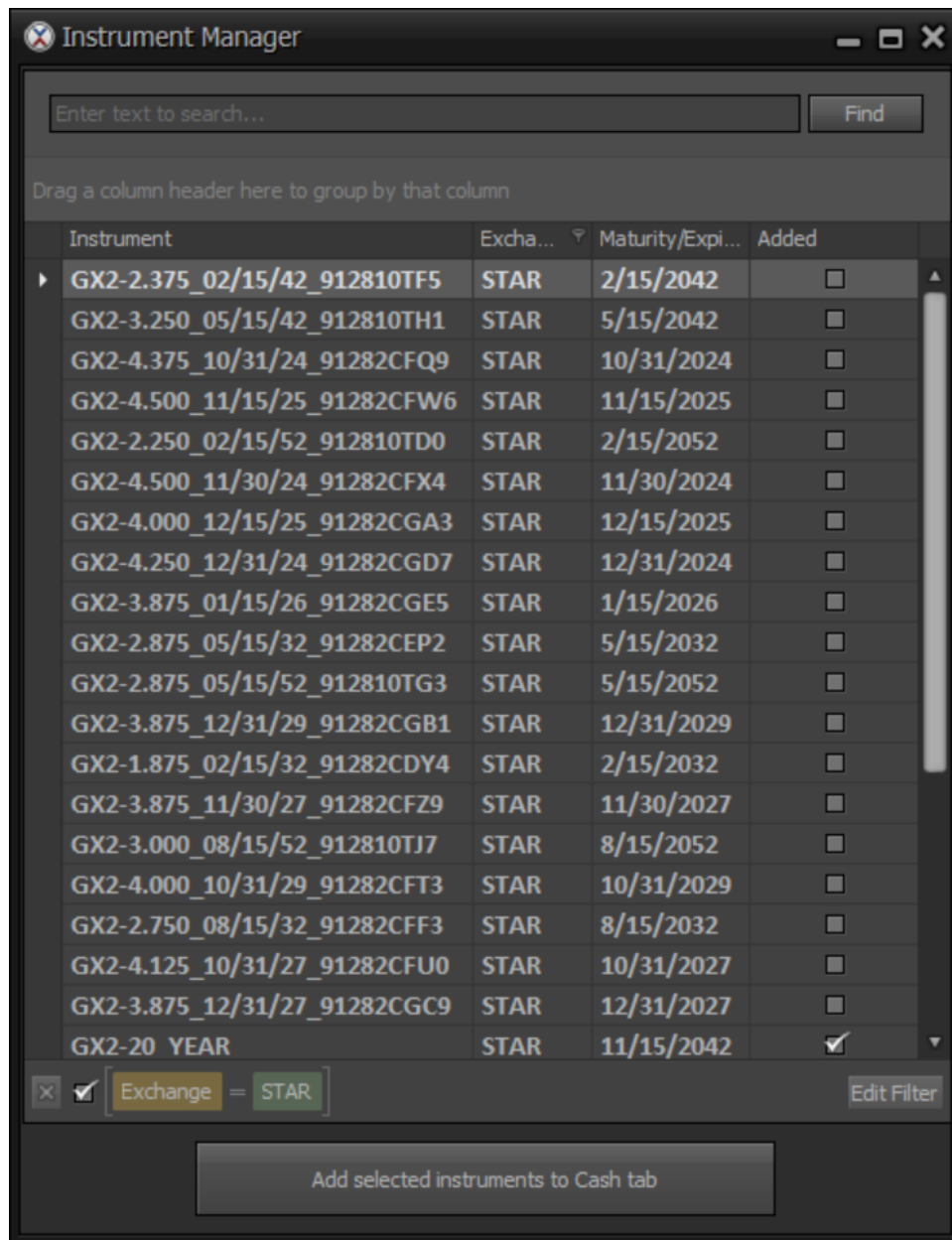
The screenshot shows the 'Single Fast Trade Corral' window. At the top, there are buttons for 'CANCEL ALL', 'Quick Order Entry' (checked), 'Quick Add', 'Manage Instruments', and 'Price Picker'. Below this is a table of instruments with columns for Instrument, Exchange, Total Buy Qty, Buy Qty, Bid Size, Bid Yield, Bid, Ask, Ask Yield, Ask Size, Sell Qty, and Total Sell Qty. The table lists six instruments: GX2-30_YEAR, GX2-10_YEAR, GX2-3_YEAR, GX2-7_YEAR, GX2-2_YEAR, and GX2-5_YEAR, all with an exchange of STAR. Below the table is a 'Single Order' section. It includes a 'Single Order Entry' dropdown set to 'GX2-10_YEAR'. There are input fields for 'Price' (102-186.5) and 'Size' (1). There are also buttons for 'BUY' and 'SELL'. To the right of the 'Size' field is a 'Default Size' dropdown set to 1. Further right are buttons for 'CANCEL ORDERS', 'CANCEL OFFER', and 'CANCEL BID'. At the bottom left, there are tabs for 'Cash', 'Futures', and 'Other'.

Instrument	Exchange	Total Buy Qty	Buy Qty	Bid Size	Bid Yield	Bid	Ask	Ask Yield	Ask Size	Sell Qty	Total Sell Qty
GX2-30_YEAR	STAR	0	0	1	2.595	105-25	105-251.5	2.595	1	0	0
GX2-10_YEAR	STAR	0	0	2	2.083	102-186.5	102-187	2.082	2	0	0
GX2-3_YEAR	STAR	0	0	97	1.812	99-262	99-263	1.810	71	0	0
GX2-7_YEAR	STAR	0	0	4	1.952	99-160.5	99-161.5	1.951	4	0	0
GX2-2_YEAR	STAR	0	0	17	1.837	99-187.5	99-19	1.836	170	0	0
GX2-5_YEAR	STAR	0	0	151	1.847	99-172	99-173	1.847	37	0	0



Single Fast Trade Corral (continued)

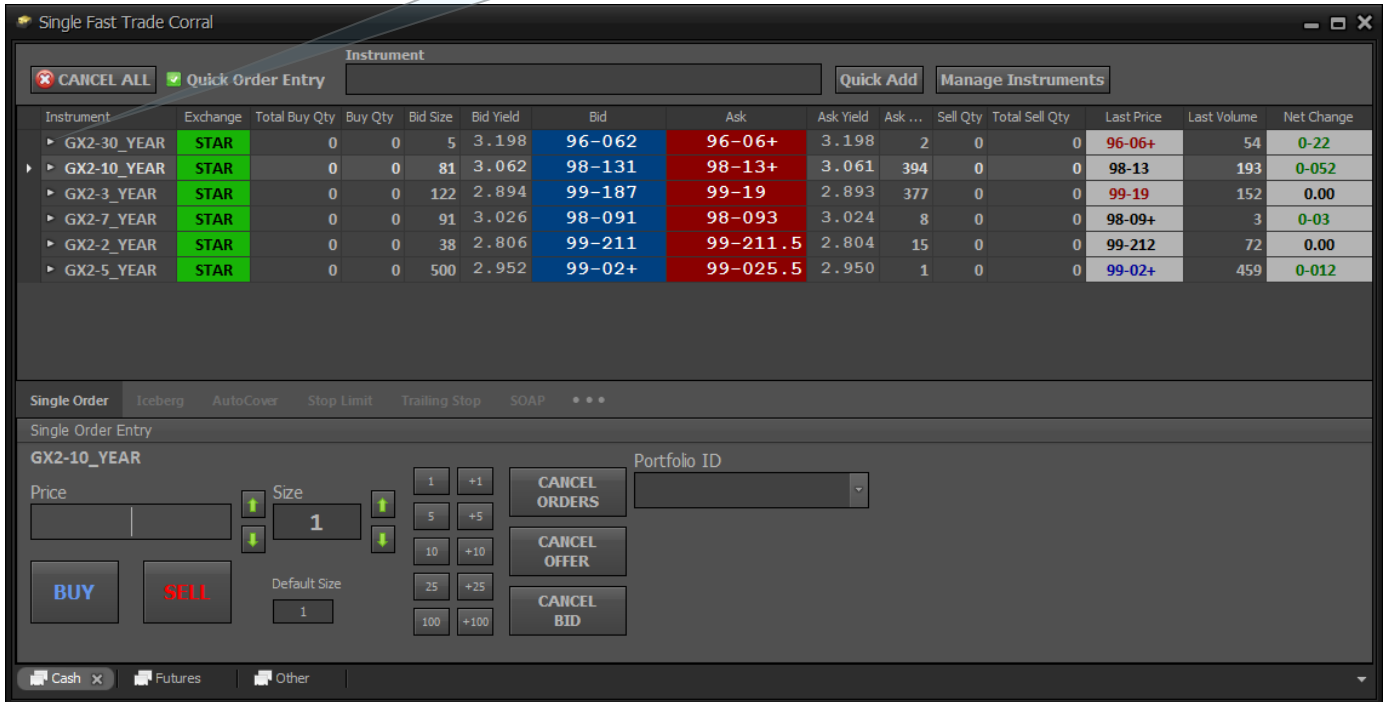
To add an instrument using the Instrument Manager highlight the instrument and select “Add selected instruments to Single Fast Trade tab.” To add multiple instruments hold down the Ctrl key while selecting the instruments. A check mark will appear in the Added column when the instrument has successfully been added to your Single Fast Trade Corral. Double-clicking on a row will also add it to the Single Fast Trade window.



Single Fast Trade Corral (continued)

The instruments you have chosen to add to your Single Fast Trade Corral are now ready for trading.

Click to see price depth for selected Instrument



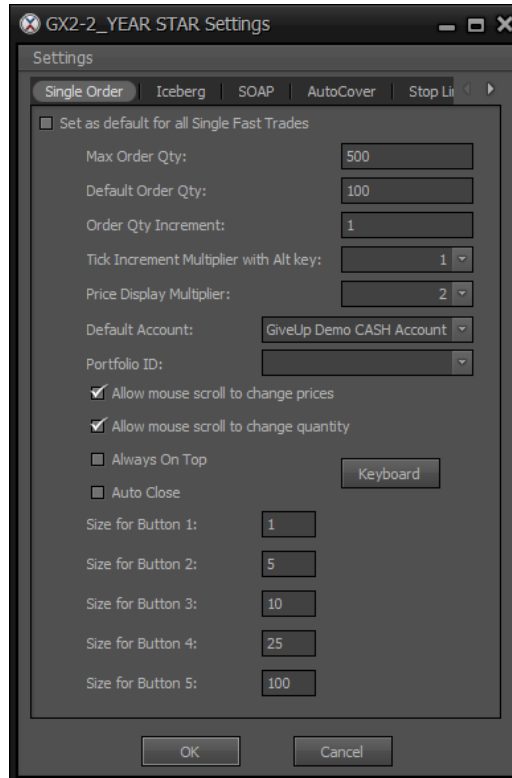
The screenshot shows the 'Single Fast Trade Corral' window. At the top, there's a 'CANCEL ALL' button and a 'Quick Order Entry' checkbox. Below this is a table of instruments. A callout bubble points to the 'GX2-10_YEAR' instrument in the table, with the text 'Click to see price depth for selected Instrument'. The table has columns for Instrument, Exchange, Total Buy Qty, Buy Qty, Bid Size, Bid Yield, Bid, Ask, Ask Yield, Ask ..., Sell Qty, Total Sell Qty, Last Price, Last Volume, and Net Change. Below the table, there's a 'Single Order' section with tabs for 'Iceberg', 'AutoCover', 'Stop Limit', 'Trailing Stop', and 'SOAP'. The 'Single Order Entry' window is open for 'GX2-10_YEAR', showing fields for Price, Size (set to 1), and buttons for BUY, SELL, CANCEL ORDERS, CANCEL OFFER, and CANCEL BID. The bottom of the window has tabs for 'Cash', 'Futures', and 'Other'.

Instrument	Exchange	Total Buy Qty	Buy Qty	Bid Size	Bid Yield	Bid	Ask	Ask Yield	Ask ...	Sell Qty	Total Sell Qty	Last Price	Last Volume	Net Change
▶ GX2-30_YEAR	STAR	0	0	5	3.198	96-062	96-06+	3.198	2	0	0	96-06+	54	0-22
▶ GX2-10_YEAR	STAR	0	0	81	3.062	98-131	98-13+	3.061	394	0	0	98-13	193	0-052
▶ GX2-3_YEAR	STAR	0	0	122	2.894	99-187	99-19	2.893	377	0	0	99-19	152	0.00
▶ GX2-7_YEAR	STAR	0	0	91	3.026	98-091	98-093	3.024	8	0	0	98-09+	3	0-03
▶ GX2-2_YEAR	STAR	0	0	38	2.806	99-211	99-211.5	2.804	15	0	0	99-212	72	0.00
▶ GX2-5_YEAR	STAR	0	0	500	2.952	99-02+	99-025.5	2.950	1	0	0	99-02+	459	0-012

- ◆ **Instrument:** Displays instrument for single order trading.
- ◆ **Exchange:** Displays the ECN for the instrument.
- ◆ **Total Buy Qty:** Total aggregated size of bids submitted by user for the instrument.
- ◆ **Bid Size:** Current quantity available at the best bid price.
- ◆ **Bid:** Current best bid price.
- ◆ **Ask:** Current best offer price.
- ◆ **Ask Size:** Current quantity available at the best offer price.
- ◆ **Total Sell Qty:** Total aggregated size of offers submitted by user for the instrument.
- ◆ **Order:** Brings up Order Entry Window.
- ◆ **Last Price:** Last traded price.
- ◆ **Last Volume:** Last traded volume.
- ◆ **Net Change:** Displays the difference between prior day settle and current last trade price.
- ◆ **Hit/Lift Buttons:** Clicking the Hit button will send a sell order at the current bid price

Single Fast Trade Corral (continued)

Before you are ready to submit a single order or strategy you must set your order settings per instrument. Right-click on an item in the Single Fast Trade Corral and select “Order Entry Settings.”



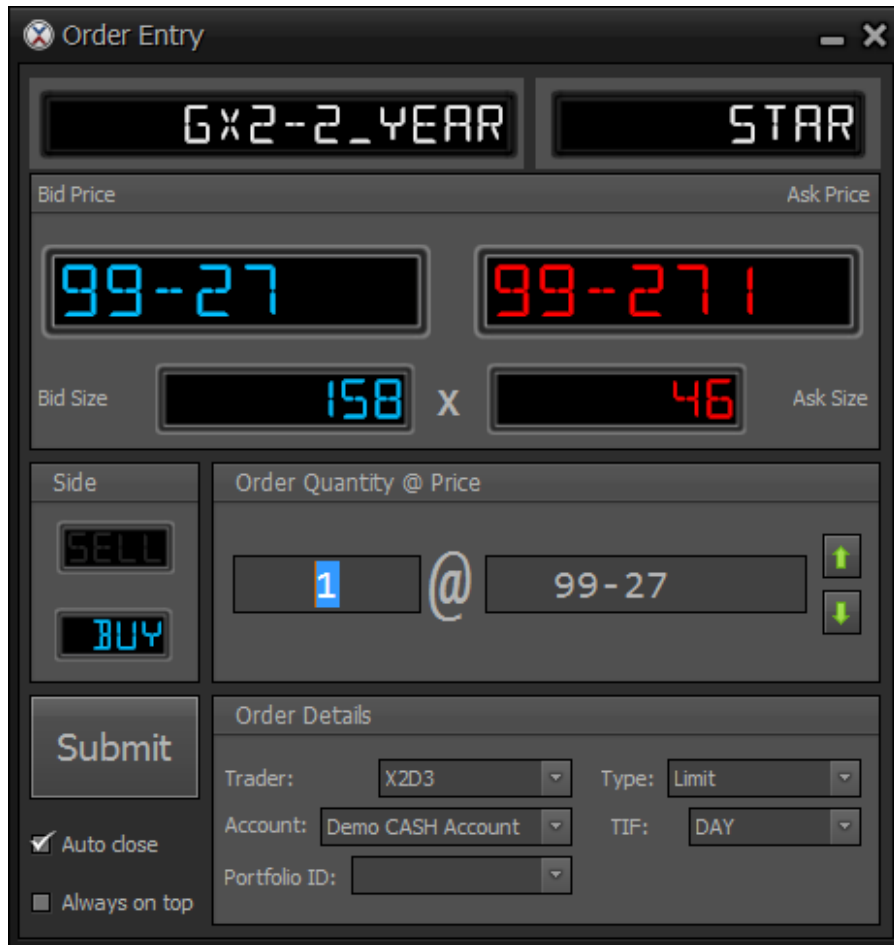
- ♦ **Max Order Qty:** Maximum quantity able to be traded at one time.
- ♦ **Default Order Qty:** Default order quantity for submission shown in Order Entry Window.
- ♦ **Order Qty Increments:** The quantity by which the order size will be lowered or raised while using the mouse scroll.
- ♦ **Tick Increment Multiplier with Alt Key:** When using the arrow keys or arrow buttons to modify price, holding the alt key will use this multiplier to step through prices.
- ♦ **Price Display Multiplier:** The displayed tick of prices in the Single Fast Trade is affected by this multiplier. If the instrument is displayed in 1/16ths, setting this value to 2 would result in displaying the prices in 1/8ths and aggregating the liquidity of 1/16th prices into the 1/8 price.
- ♦ **Default Account:** Trader account .
- ♦ **Portfolio ID:** Integer ID assigned by the trader to track performance.
- ♦ **Set as default for all Single Fast Trades:** Apply these settings to all instruments.



Single Fast Trade Corral (continued)

- ♦ **Allow mouse scroll to change prices/quantity:** When checked, the scroll wheel on the mouse can be used to increment/decrement the order price and quantity in the order entry form.
- ♦ **Always On Top:** Keeps the Order Entry window on top of other GX2 windows.
- ♦ **Auto Close:** Indicates whether the Order Entry window will be closed after an order is submitted.
- ♦ **Keyboard Button:** Opens dialog where keyboard shortcuts can be create for each instrument/side combination.

Single Order Entry Window



The screenshot shows the 'Order Entry' window with the following fields and values:

- Symbol:** GX2-2_YEAR
- Contract:** STAR
- Bid Price:** 99-27
- Ask Price:** 99-271
- Bid Size:** 158
- Ask Size:** 46
- Side:** BUY (SELL is also visible)
- Order Quantity @ Price:** 1 @ 99-27
- Submit** button
- Auto close** checkbox (checked)
- Always on top** checkbox (unchecked)
- Order Details:**
 - Trader:** X2D3
 - Account:** Demo CASH Account
 - Portfolio ID:** (empty)
 - Type:** Limit
 - TIF:** DAY

- ♦ **Bid Price:** Current best bid price.
- ♦ **Bid Size:** Current quantity available at the best bid price.
- ♦ **Ask Price:** Current best offer price.
- ♦ **Ask Size:** Current quantity available at the best offer price.
- ♦ **Side:** Select whether you would like to submit a bid or offer order.
- ♦ **Order Quantity @ Price:** Enter quantity you would like to trade and at which price.
- ♦ **Trader:** Trader on whose behalf the order will be sent.
- ♦ **Account:** Trader account to be sent on the order.
- ♦ **TIF:** Time in force dropdown.
- ♦ **Type:** Dropdown with multiple types of single orders. Types of orders: Limit, Stop, Stop Limit, IOC, FOK, and Market. Some exchanges may not support all types. Orders sent with unsupported types will be rejected.
- ♦ **Portfolio ID:** Integer ID assigned by the trader to track performance.
- ♦ **Submit:** Used to submit order once all fields have been entered.

Single Orders Window

The Outright Orders Window displays all submitted single orders. From this window you may cancel or modify your orders.

Select the pencil to bring up the order entry window to modify your order.

Click — or + to adjust the price of a working order

Use the refresh button to reset the price to the current working price.

Outright Orders - SNA01 - 11005 - SampleWorkspace.xml

Drag a column header here to group by that column

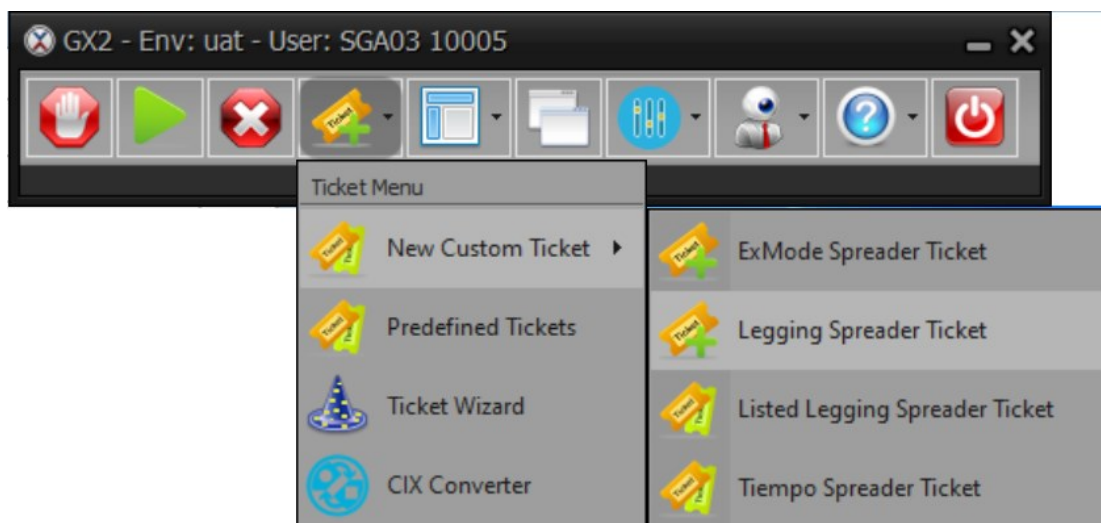
Timestamp	M	X	State	Symbol	Excha...	Side	Qty	Price	+	Reset	Submit	FilledQty	Type
05/20/2016 14:10:12.557			WORKING	GX2-2_YEAR	STAR	BUY	1	99-23	+			0	Limit
05/20/2016 14:10:23.189			CANCELED	GX2-30_YEAR	STAR	SELL	0	97-08	+			0	Limit

[X] [State] = 'WORKING' Or [State] = 'FILLED' Edit Filter

Used to submit order after a change of price is made from this window. You can also double-click on the price to submit a modified order.

Multi-Leg Algos

Legging Spreader: The Legging Spreader algo works two legged spreads at a user specified spread level. The user chooses one leg of the spread as the quote leg. An order is submitted for the quote leg at a price where the second leg of the spread can be filled at an immediately executable price in the market and would achieve the user specified spread level. Every time a fill is received in the quote leg, an order that crosses the bid/ask spread is placed in the second leg. If that order is not immediately filled due to the market moving, a micro-price market structure algo is used to determine when to cross the bid/ask spread again.



Multi-Leg Algos

Legging Spreader (continued)



Number of Prices: Seeds the market with up to two price levels

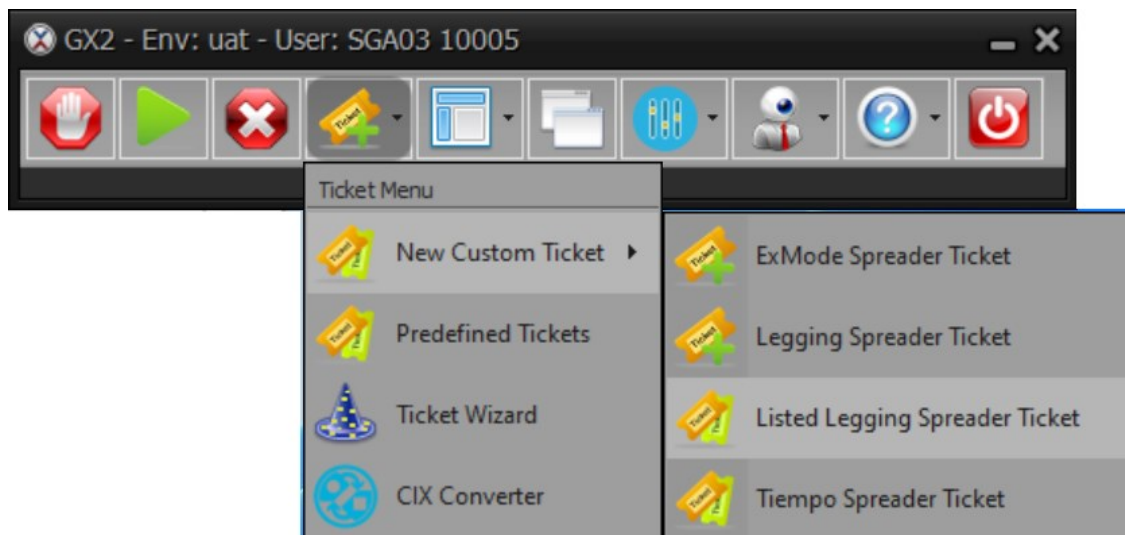
Max Working Qty: Size of individual leg you want to expose to the market.

Product	Quote Leg	B/S Decimal...	Factor	Divisor	Total	Bid	Ask	DV01
UB_MAR23	<input type="checkbox"/>	1.0000	1	1	100	134.688	134.719	22,406.1
UB_JUN23	<input checked="" type="checkbox"/>	-1.0000	-1	1	-100	135.031	135.063	-22,305.8
*	<input type="checkbox"/>							

- ◆ **Quote Leg:** Choose less liquid contract. Tail hedging will occur in the non-quote leg to achieve the desired ration
- ◆ **B/S Decimal:** Number of contracts you would like to trade. Always assume you are creating a BUY ticket when creating a ticket. A positive increment will represents a bid while a negative increment represents an offer for that product. (Leg Increment multiplied by Number of Increments will give you the total amount to be traded for that ticket).
- ◆ **Factor:** Ratio between products.
- ◆ **Total:** Total number of contracts to complete the ticket. This is the leg increment multiplied by the number of increments.
- ◆ **Bid & Ask:** Current best bid and ask price for that Product.
- ◆ **Tick:** Minimum adjusted increment for a non working ticket.
- ◆ **Working Tick:** Minimum adjusted increment for a working ticket.
- ◆ **Adjustor:** Input a positive or negative number to offset the current market level.
- ◆ **Portfolio ID:** Integer ID assigned by the trader to track performance.

Multi-Leg Algos

Listed Legging Spreader: The Listed Legging Spreader algo works two legged spreads which trade directly on an exchange at a user specified spread level. Orders are worked for the quote leg of the spread and for the exchange listed spread at a price where the second leg of the spread can be filled at an immediately executable price in the market and would achieve the user specified spread level. Every time a fill is received in the quote leg or in the exchange listed spread, an order that crosses the bid/ask spread is placed in the second leg. If that order is not immediately filled due to the market moving, a micro-price market structure algo is used to determine when to cross the bid/ask spread again.



Multi-Leg Algos

Listed Legging Spreader (continued)

Number of Prices:

Seeds the market with up to two price levels

Max Working Qty:

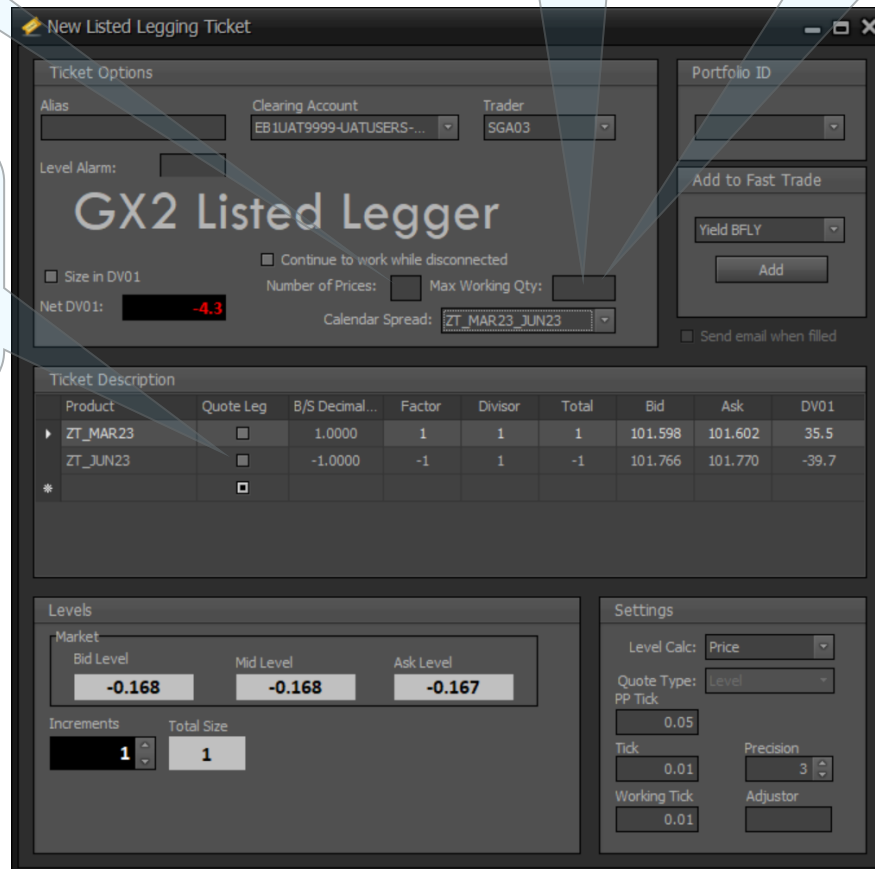
Size of individual leg you want to expose to the market.

Calendar Spread:

Select desired calendar spread for execution

Quote Leg:

Choose less liquid contract. Tail hedging will occur in the non-quote leg to achieve the desired ratio.

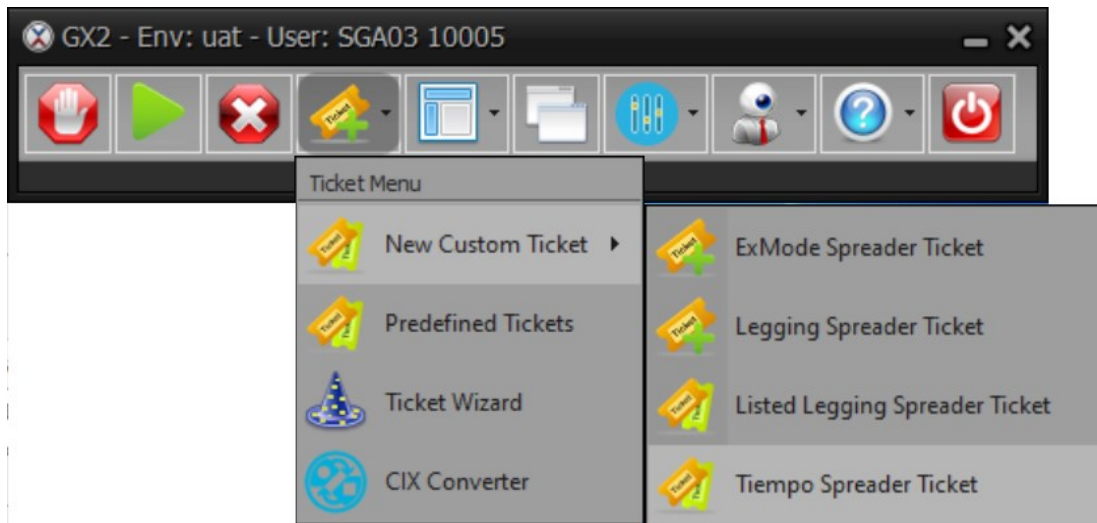


Product	Quote Leg	B/S Decimal...	Factor	Divisor	Total	Bid	Ask	DV01
ZT_MAR23	<input type="checkbox"/>	1.0000	1	1	1	101.598	101.602	35.5
ZT_JUN23	<input type="checkbox"/>	-1.0000	-1	1	-1	101.766	101.770	-39.7
*	<input type="checkbox"/>							

- ◆ **B/S Decimal:** Number of contracts you would like to trade. Always assume you are creating a BUY ticket when creating a ticket. A positive increment will represents a bid while a negative increment represents an offer for that product. (Leg Increment multiplied by Number of Increments will give you the total amount to be traded for that ticket).
- ◆ **Factor:** Ratio between products.
- ◆ **Total:** Total number of contracts to complete the ticket. This is the leg increment multiplied by the number of increments.
- ◆ **Bid & Ask:** Current best bid and ask price for that Product.
- ◆ **Tick:** Minimum adjusted increment for a non working ticket.
- ◆ **Working Tick:** Minimum adjusted increment for a working ticket.
- ◆ **Adjustor:** Input a positive or negative number to offset the current market level.
- ◆ **Portfolio ID:** Integer ID assigned by the trader to track performance.

Multi-Leg Algos

Tiempo: The Tiempo algo splits a parent spread order into slices which are submitted when the user specified threshold spread level is satisfied. The objective of the TIEMPO algo is to achieve the Time Weighted Average Price of the spread during the time that the user specified threshold spread level is satisfied. When a slice is submitted, each leg of the spread slice is submitted as a separate child order. These child orders are handled by micro-price market structure algos selected by the user that determine the price at which to work passively, or cross the bid / ask spread when appropriate. Since slices are only submitted when the user specified spread level is satisfied, the total quantity filled may be less than the total order quantity.



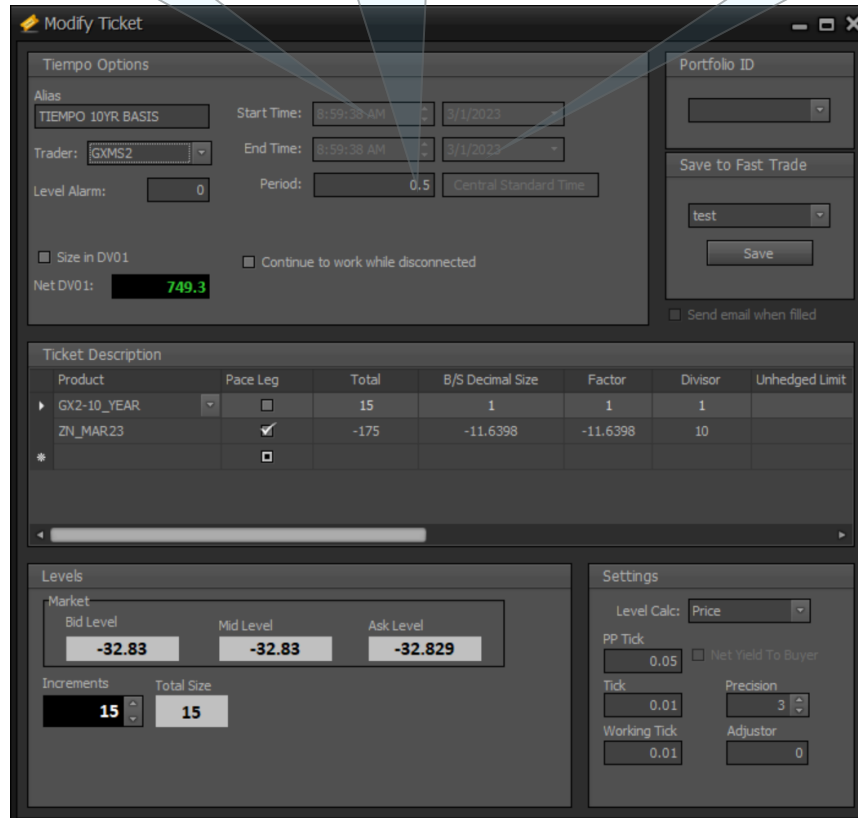
Multi-Leg Algos

Tiempo (continued)

Start Time: Time in which the algo begins to work

Period: Minimum number of minutes to wait in between sending order slices

End Time: Time in which the algo will be completed



Modify Ticket

Tiempo Options

Alias: TIEMPO 10YR BASIS Start Time: 8:59:38 AM 3/1/2023

Trader: GXMS2 End Time: 8:59:38 AM 3/1/2023

Level Alarm: 0 Period: 0.5 Central Standard Time

☐ Size in DV01 ☐ Continue to work while disconnected

Net DV01: 749.3

Portfolio ID

Save to Fast Trade

test

Save

☐ Send email when filled

Ticket Description

Product	Pace Leg	Total	B/S Decimal Size	Factor	Divisor	Unhedged Limit
GX2-10_YEAR	<input type="checkbox"/>	15	1	1	1	
ZN_MAR23	<input checked="" type="checkbox"/>	-175	-11.6398	-11.6398	10	
*	<input type="checkbox"/>					

Levels

Market

Bid Level: -32.83 Mid Level: -32.83 Ask Level: -32.829

Increments: 15 Total Size: 15

Settings

Level Calc: Price

PP Tick: 0.05 ☐ Net Yield To Buyer

Tick: 0.01 Precision: 3

Working Tick: 0.01 Adjustor: 0

- ◆ **Pace Leg:** Slices are created in two steps. First, the quantity of the **Pace Leg** is evenly distributed between the time periods in order to minimize market impact. No slice can have a pace leg quantity of 0. Second, the quantities of the other legs in each slice are chosen to best achieve balance according to the user specified B/S Decimal Quantities. These legs will be rounded to the nearest integer and could be set to 0.
- ◆ **B/S Decimal:** Number of contracts you would like to trade. Always assume you are creating a BUY ticket when creating a ticket. A positive increment will represent a bid while a negative increment represents an offer for that product. (Leg Increment multiplied by Number of Increments will give you the total amount to be traded for that ticket).
- ◆ **Factor:** Ratio between products.
- ◆ **Total:** Total number of contracts to complete the ticket. This is the leg increment multiplied by the number of increments.
- ◆ **Tick:** Minimum adjusted increment for a non working ticket.
- ◆ **Working Tick:** Minimum adjusted increment for a working ticket.
- ◆ **Adjustor:** Input a positive or negative number to offset the current market level.
- ◆ **Portfolio ID:** Integer ID assigned by the trader to track performance.

Multi-Leg Algos

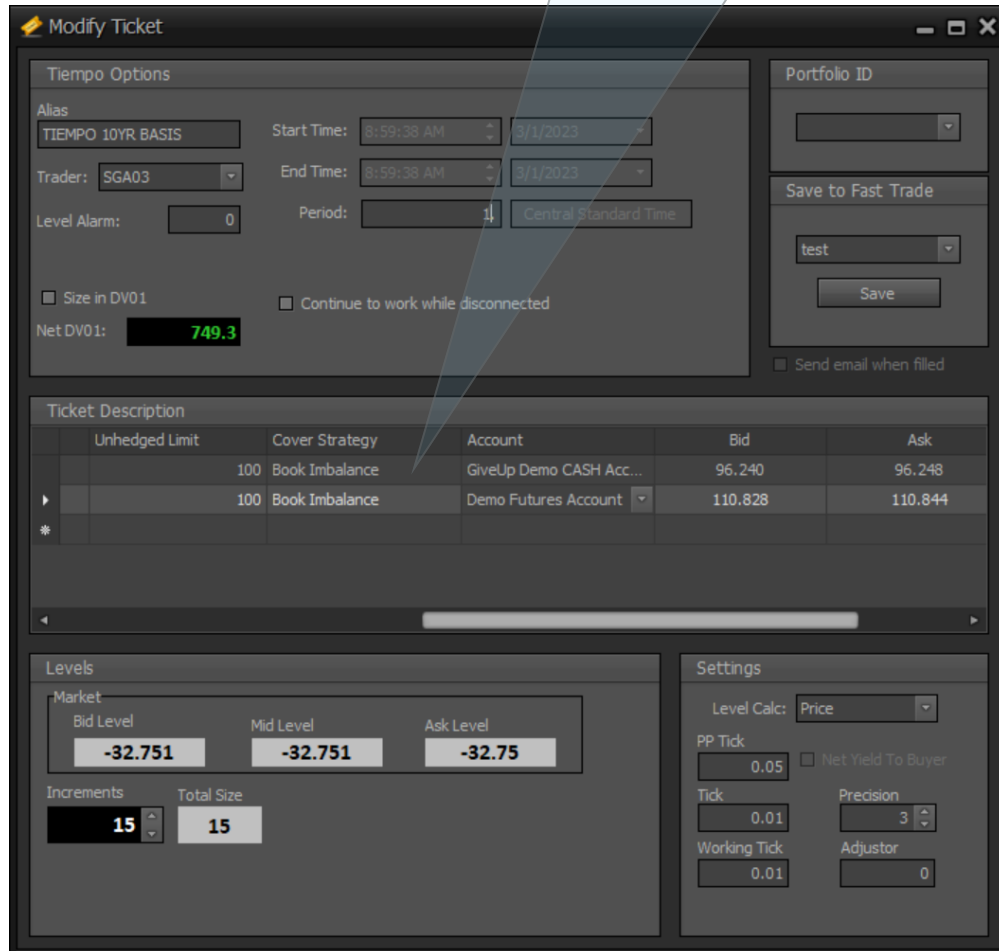
Tiempo (continued)

Cover Strategies:

Book Imbalance—Aggresses markets based on book imbalance

Market Size Ratio—Aggresses markets based on market size ration

Liquidity Depletion—Aggresses markets based on liquidity depletion



Modify Ticket

Tiempo Options

Alias: TIEMPO 10YR BASIS Start Time: 8:59:38 AM 3/1/2023

Trader: SGA03 End Time: 8:59:38 AM 3/1/2023

Level Alarm: 0 Period: 1 Central Standard Time

☐ Size in DV01 ☐ Continue to work while disconnected

Net DV01: 749.3

Ticket Description

	Unhedged Limit	Cover Strategy	Account	Bid	Ask
	100	Book Imbalance	GiveUp Demo CASH Acc...	96.240	96.248
▶	100	Book Imbalance	Demo Futures Account	110.828	110.844
*					

Levels

Market

Bid Level: -32.751 Mid Level: -32.751 Ask Level: -32.75

Increments: 15 Total Size: 15

Settings

Level Calc: Price

PP Tick: 0.05 ☐ Net Yield To Buyer

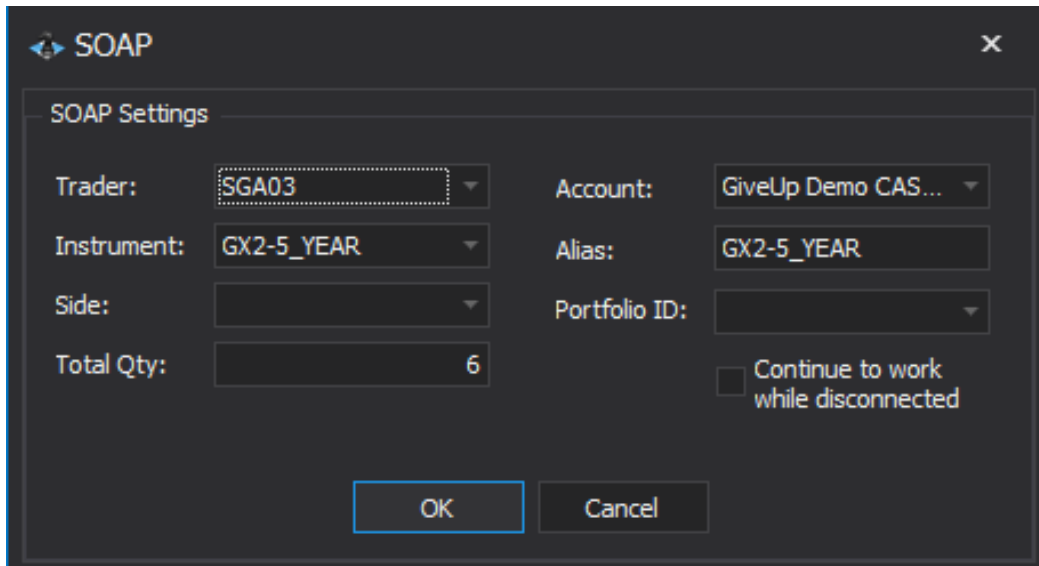
Tick: 0.01 Precision: 3

Working Tick: 0.01 Adjustor: 0

- ◆ **Unhedged Limit:** As slices are submitted to the market, each leg is managed independently by a different algorithm which uses microstructure signals to determine when to modify the price. After submitting many slices if there has been no signal to aggress the market, a position may build up in one of the legs as the algorithm is patiently waiting to be filled passively. No slice will be submitted to the market if submitting it would cause the position in any of the legs to increase above its **Unhedged Limit**.

Algos For Outrights:

Single Order Arrival Price: The **SOAP** algo works an order passively at or away from the current best bid or offer and transitions this order to cross the bid/offer spread when market micro structure dictates. When used repeatedly, the algo attempts to execute orders at or better than the mid-price at the time of order placement.

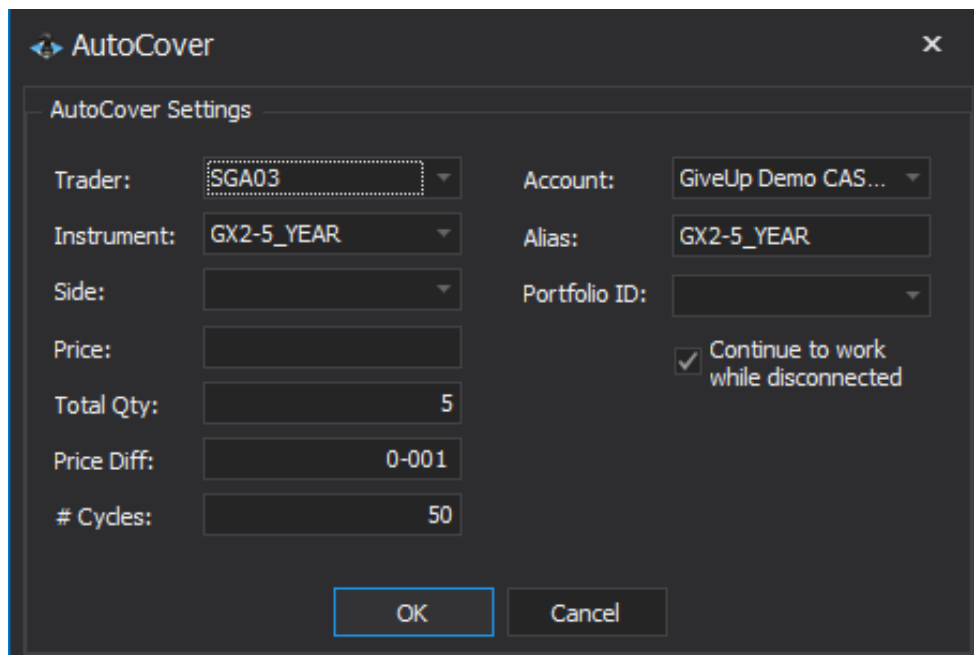


The image shows a 'SOAP' settings dialog box. It has a title bar with a double-headed arrow icon and the text 'SOAP'. Below the title bar is a section titled 'SOAP Settings'. Inside this section, there are several fields: 'Trader:' with a dropdown menu showing 'SGA03', 'Instrument:' with a dropdown menu showing 'GX2-5_YEAR', 'Side:' with a dropdown menu, 'Total Qty:' with a text box containing '6', 'Account:' with a dropdown menu showing 'GiveUp Demo CAS...', 'Alias:' with a text box containing 'GX2-5_YEAR', and 'Portfolio ID:' with a dropdown menu. There is also a checkbox labeled 'Continue to work while disconnected' which is currently unchecked. At the bottom of the dialog are 'OK' and 'Cancel' buttons.

- ♦ **Trader:** Trader the order will be sent on behalf of
- ♦ **Instrument:** Instrument that will be traded
- ♦ **Side:** Determines if you are buying or selling the instrument
- ♦ **Total Qty:** Total size to be traded
- ♦ **Account:** The trader account that will be used on the order
- ♦ **Alias:** Name given to strategy by user
- ♦ **Portfolio ID:** ID assigned to the strategy to track performance
- ♦ **Continue to work while disconnected:** This allows the strategy to continue working for the entire trading session while the trader is not running the trading application

Algos For Outrights: (continued)

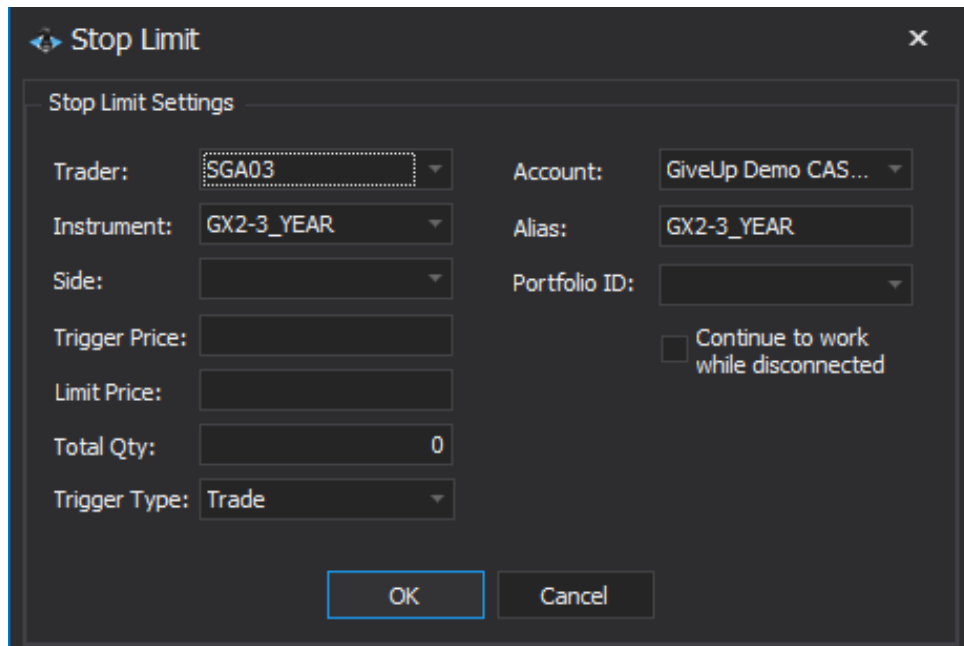
AutoCover: The **AutoCover** algo allows users to place initiating orders, that once executed, automatically generate an order to cover that position. Users specify the initial price, quantity, price difference to the covering order, and number of times to repeat this cycle.



- ♦ **Trader:** Trader the order will be sent on behalf of
- ♦ **Instrument:** Instrument that will be traded
- ♦ **Side:** Determines if you are buying or selling the instrument
- ♦ **Price:** Limit price the entry order will be working
- ♦ **Total Qty:** Size of the position that will be entered and exited in each cycle
- ♦ **Price Diff:** Determines the price of the covered order in relation to the price setting
- ♦ **# Cycles:** Total number of times the strategy will cover its position
- ♦ **Account:** The trader account that will be used on the order
- ♦ **Alias:** Name given to strategy by user
- ♦ **Portfolio ID:** ID assigned to the strategy to track performance
- ♦ **Continue to work while disconnected:** This allows the strategy to continue working for the entire trading session while the trader is not running the trading application

Algos For Outrights: (continued)

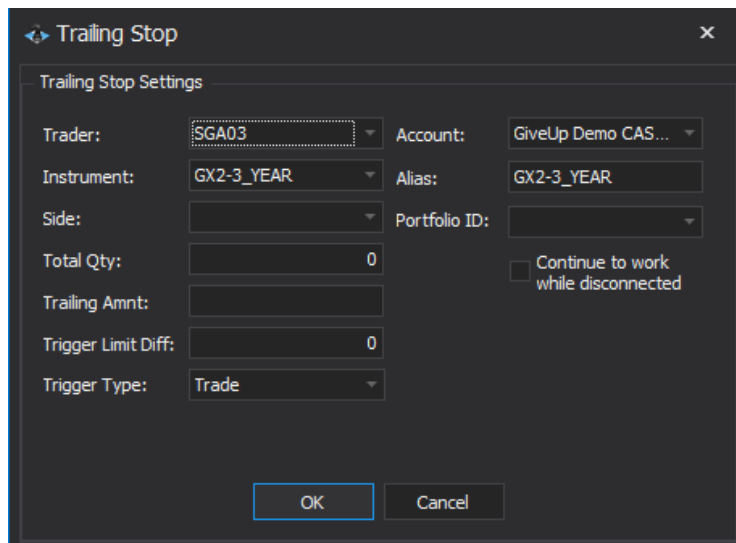
Stop Limit: The **Stop Limit** algo allows the user to place a BUY order above the market, or a SELL order below the market. The user chooses the price that triggers the Stop Limit. Once triggered, a limit order will be placed at the Stop Limit price. The user may select the bid, the ask, or the trade price as the trigger price.



- ♦ **Trader:** Trader the order will be sent on behalf of
- ♦ **Instrument:** Instrument that will be traded
- ♦ **Side:** Determines if you are buying or selling the instrument
- ♦ **Trigger Price:** Price of the market that once reached will trigger entry of the limit order
- ♦ **Limit Price:** Price the limit order will be sent for once the trigger price has been reached
- ♦ **Total Qty:** Total size to be traded
- ♦ **Trigger Type:** This determines the market (best bid, best offer, trade price) to which trigger price is compared.
- ♦ **Account:** The trader account that will be used on the order
- ♦ **Alias:** Name given to strategy by user
- ♦ **Portfolio ID:** ID assigned to the strategy to track performance
- ♦ **Continue to work while disconnected:** This allows the strategy to continue working for the entire trading session while the trader is not running the trading application

Algos For Outrights: (continued)

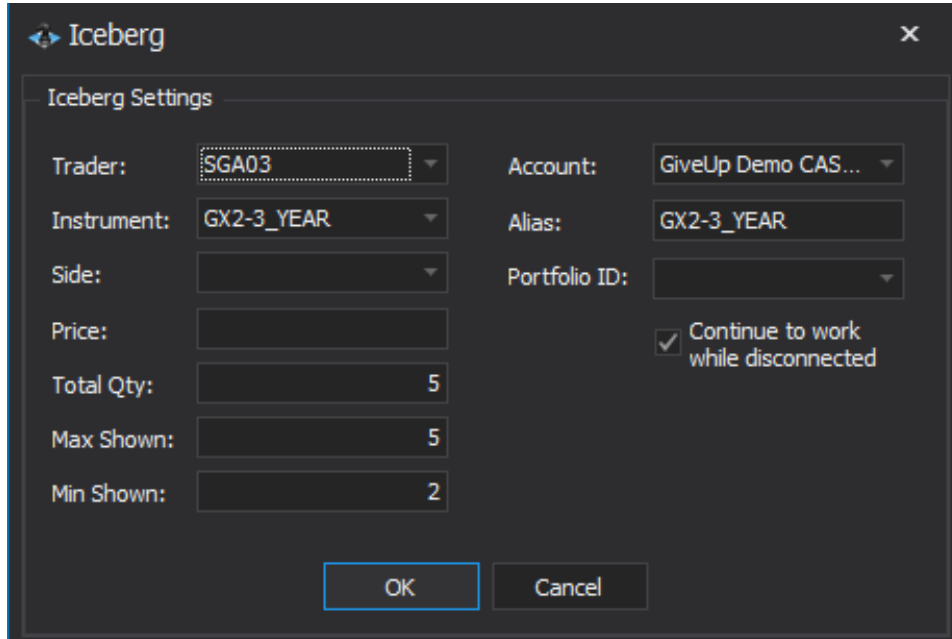
Trailing Stop: The **Trailing Stop Limit** also allows the user to limit losses without limiting gains. The Trailing Stop Limit will adjust the stop trigger price of the order by tracking the price designated in the trigger type field (best bid, best offer, last trade). In the case of a sell trailing stop with a trigger type of best offer, the stop trigger price will trail the best offer by the user defined trailing amount. As the best offer rises the stop trigger price will rise as well. The limit order price will also continually recalculate based on the updated stop trigger price. If the best offer price falls, the stop trigger price will remain unchanged. If the best offer price hits the trigger price, a limit order will be generated at the last calculated limit price. A buy trailing stop limit order mirrors the functionality of a sell trailing stop limit order.



- ◆ **Trader:** Trader the order will be sent on behalf of
- ◆ **Instrument:** Instrument that will be traded
- ◆ **Side:** Determines if you are buying or selling the instrument
- ◆ **Total Qty:** Total size to be traded
- ◆ **Trailing Amnt:** The amount the price of the trigger will trail the current market as defined by the Trigger Type
- ◆ **Trigger Limit Diff:** Determines the price of the limit order. This can be negative. If the value is negative, the limit price will be away from the trigger price. If positive, the limit price will be through the trigger price
- ◆ **Trigger Type:** This determines the market (best bid, best offer, trade price) to which trigger price is compared.
- ◆ **Account:** The trader account that will be used on the order
- ◆ **Alias:** Name given to strategy by user
- ◆ **Portfolio ID:** ID assigned to the strategy to track performance
- ◆ **Continue to work while disconnected:** This allows the strategy to continue working for the entire trading session while the trader is not running the trading application

Algos For Outrights: (continued)

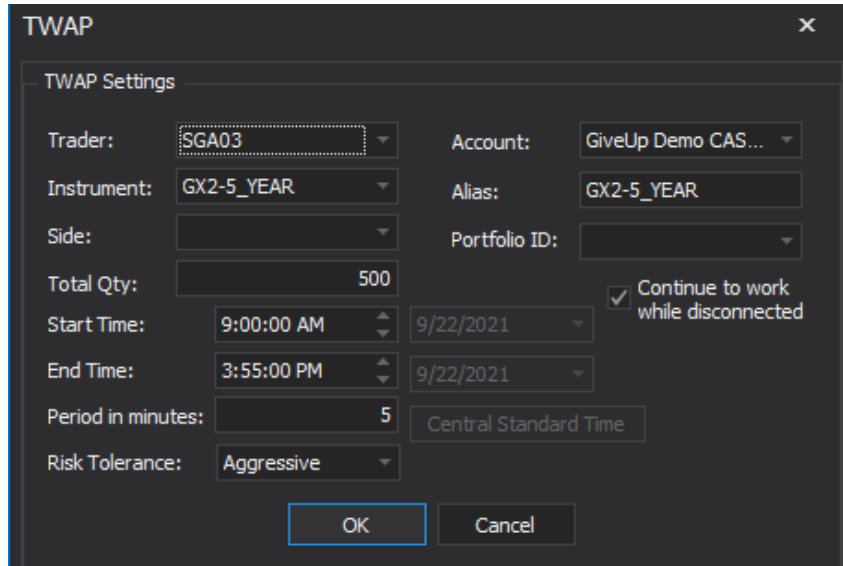
Iceberg: The **Iceberg** algo allows users to work large single parent orders in a series of smaller child orders across available venues for the purposes of minimizing market impact of the size of the original parent order. Users can define both the maximum and minimum quantity shown which STAR will manage across eight liquidity venues.



- ♦ **Trader:** Trader the order will be sent on behalf of
- ♦ **Instrument:** Instrument that will be traded
- ♦ **Side:** Determines if you are buying or selling the instrument
- ♦ **Price:** Limit price the entry order will be working
- ♦ **Total Qty:** Total size to be traded
- ♦ **Max Shown:** Maximum size of the order to be worked at one time
- ♦ **Min Shown:** Minimum size of the order to be worked at one time
- ♦ **Account:** The trader account that will be used on the order
- ♦ **Alias:** Name given to strategy by user
- ♦ **Portfolio ID:** ID assigned to the strategy to track performance
- ♦ **Continue to work while disconnected:** This allows the strategy to continue working for the entire trading session while the trader is not running the trading application

Algos For Outrights: (continued)

TWAP: The **TWAP** algo allows a large parent order to be sliced equally into child orders across a user defined time frame. The objective of the **TWAP** algo is to meet or exceed the Time Weighted Average Price of the instrument during the life of the order. Each child order is handled with micro-price market structure algos that determine the price at which to work passively, or cross the bid / ask spread when appropriate. A choice reflecting the risk aversion preference of the trader is available for the underlying microstructure algo.



- ◆ **Trader:** Trader the order will be sent on behalf of
- ◆ **Instrument:** Instrument that will be traded
- ◆ **Side:** Determines if you are buying or selling the instrument
- ◆ **Total Qty:** Total size to be traded
- ◆ **Start Time:** Time in which the algo strategy begins to work
- ◆ **End Time:** Time in which the algo strategy will be completed
- ◆ **Period in minutes:** Minimum number of minutes to wait in between sending order slices
- ◆ **Risk Tolerance:** Choose between Aggressive and Conservative. Aggressive will attempt to beat the benchmark by working orders away from the market when it sees fit.
- ◆ **Account:** The trader account that will be used on the order
- ◆ **Alias:** Name given to strategy by user
- ◆ **Portfolio ID:** ID assigned to the strategy to track performance
- ◆ **Continue to work while disconnected:** This allows the strategy to continue working for the entire trading session while the trader is not running the trading application



Algos For Outrights: (continued)

VWAP: The **VWAP** allows users to work large single parent orders that are sliced into smaller child orders and executed in order to meet or exceed the Volume Weighted Average Price during a user defined time frame.

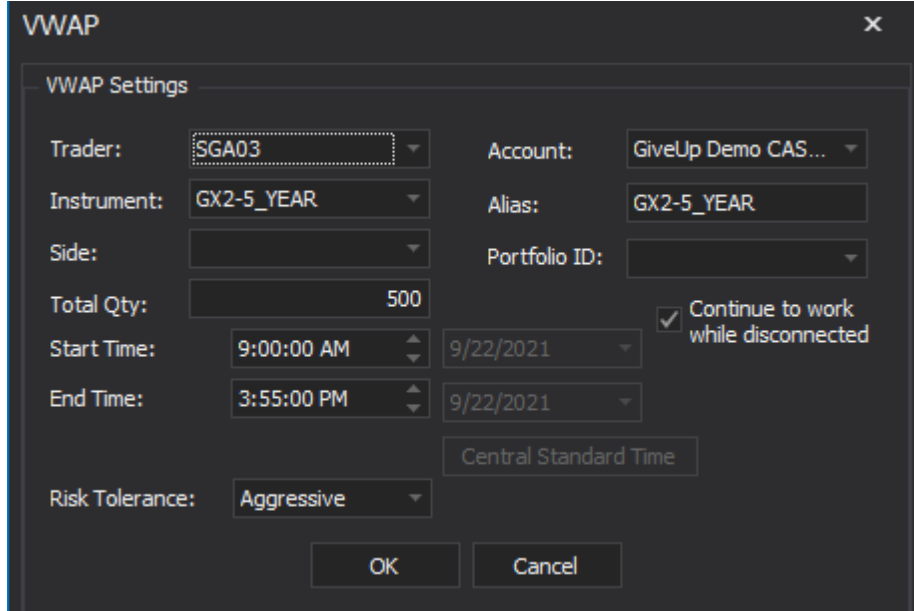
$$\text{VWAP} = (\text{Cumulative (Price*Volume)}) / (\text{Cumulative Volume})$$

The GX2 **VWAP** strategy relies on a factor model that includes month, day of the week, auction day, Fed action, etc. to create a predicted volume profile. The strategy then captures the actual volume profile as the day unfolds and applies an error correction model to break the parent order into expected volume slices for the time period of the order. All of the volume data prior to starting an order will be included as part of the error correction to both initially slice the parent order and to update those slices as the order period evolves. When slices are sent to the market, they are passed to our single order arrival price (SOAP) logic and passive orders are worked until a trigger causes the strategy to aggress the market. In this way we attempt to capture the mid-price over time on each slice, rather than instantly paying away edge.

For the user, you need only choose symbol and enter the side, the total quantity, the start time and the end time. You may also choose underlying SOAP strategy as aggressive or conservative. Conservative is defined as having less variance around the **VWAP** benchmark and paying up sooner. Aggressive is more risky and will work the passive orders longer and perhaps try to improve price from the initial level at which that child order was placed.

Algos For Outrights: (continued)

VWAP:



- ♦ **Trader:** Trader the order will be sent on behalf of
- ♦ **Instrument:** Instrument that will be traded
- ♦ **Side:** Determines if you are buying or selling the instrument
- ♦ **Total Qty:** Total size to be traded
- ♦ **Start Time:** Time in which the algo begins to work
- ♦ **End Time:** Time in which the algo will be completed
- ♦ **Risk Tolerance:** Choose between Aggressive and Conservative
- ♦ **Account:** The trader account that will be used on the order
- ♦ **Alias:** Name given to strategy by user
- ♦ **Portfolio ID:** ID assigned to the strategy to track performance
- ♦ **Continue to work while disconnected:** This allows the strategy to continue working for the entire trading session while the trader is not running the trading application

Strategy Order Window

The Strategies window displays all submitted strategy orders. From this window you may cancel or modify your strategies.

The strategy type is shown here

Price is not shown for Single Order Arrival Price until it has been filled

Displays whether the strategy will continue working on trading client disconnect

Strategies - SGA03 - 10005 - SampleWorkspace_JUN16new1.xml 1

Type	Alias	Trader	M	X	State	Side	Price	+	Reset	Submit	Total Qty	Filled Qty	On Disconnect	Strategy ID
▶ SOAP	GX2-2_YEAR	SGA03			WORKING	BUY	-				6	0	cancel	19295288482927758
▶ SOAP	GX2-30_YEAR	SGA03			FILLED	BUY	97-28+				3	3	cancel	19294554595557303
▶ Iceberg	GX2-5_YEAR	SGA03			WORKING	BUY	99-15+				5	0	work	19295011387819575
▶ AutoCover	GX2-2_YEAR	SGA03			WORKING	SELL	99-255.5				5	0	work	19295039790298836
▶ StopLimit	GX2-2_YEAR	SGA03			WORKING	BUY	99-255.5				5	0	cancel	19295100354455787
▶ TrailingStop	GX2-2_YEAR	SGA03			WORKING	BUY	99-256.5				5	0	cancel	19295191394746479

Strategy Legs Strategy Statuses Strategy Parameters

Drag a column header here to group by that column

Instrument	Wrk Buy	Filled Buy	Exchange	Account
▶ GX2-2_YEAR	0	0	STAR	GiveUp Demo CASH Account

☒ [State] = 'WORKING' Or [State] = 'FILLED'

Edit Filter

Click the arrow in the first column for more information regarding the strategy



32nd Pricing Representation in ExMode

32nd representation in GX2 is as follows

- Handle and fractional amount are separated by the ‘-’
- First two digits after the ‘-’ is the number of 32nds. 99-16 is 99 and 16/32.
- Third digits is eighths of a 32nd. 99-162 is 99 and 16/32 + 2/8 or 99 and 16.25/32.
- A ‘+’ is 4/8 or ½ of a 32nd.
- Sixteenths of a 32nd are shown as a ‘.5’ after the eight. 99-162.5 is 99 and 16/32 + 2.5/8 or 99 and 16.3125/32

GX2 Price	full point	Number of 32nds	fraction of 32nd	decimal price
99-22	99	22	0	99.6875000
99.217.5	99	21	15/16	99.6855469
99-217	99	21	7/8	99.6835938
99.216.5	99	21	13/16	99.6816406
99-216	99	21	3/4	99.6796875
99-215.5	99	21	11/16	99.6777344
99-215	99	21	5/8	99.6757813
99-21+.5	99	21	9/16	99.6738281
99-21+	99	21	plus or 1/2	99.6718750
99-213.5	99	21	7/16	99.6699219
99-213	99	21	3/8	99.6679688
99-212.5	99	21	5/16	99.6660156
99-212	99	21	1/4	99.6640625
99-211.5	99	21	3/16	99.6621094
99-211	99	21	1/8	99.6601563
99-210.5	99	21	1/16	99.6582031
99-21	99	21	0	99.6562500

Workspace Menu

Save Workspace

- Once you have set up all your tickets and have placed the windows in a spot you feel comfortable with, adjusted your column widths and applied sorting and filtering it is time to save your workspace. Click on the Workspace Menu in the Navigator and select Save Workspace. When you restart your GX2 trading application all of your tickets and windows will be right where you left them.

Snapshots

- Saving a snapshot will store all of your tickets that are not canceled or filled. You can recall these tickets by clicking 'Open Snapshot'. Snapshots save time in re-entering tickets should you need to restart your application.

Set Current Trader On Tickets

- Changes the trader set on all tickets in the Fast Trade windows to the trader that was used to login to the current session. This does not affect tickets that are already submitted and working.

Roll Instruments/Roll Predefined Tickets

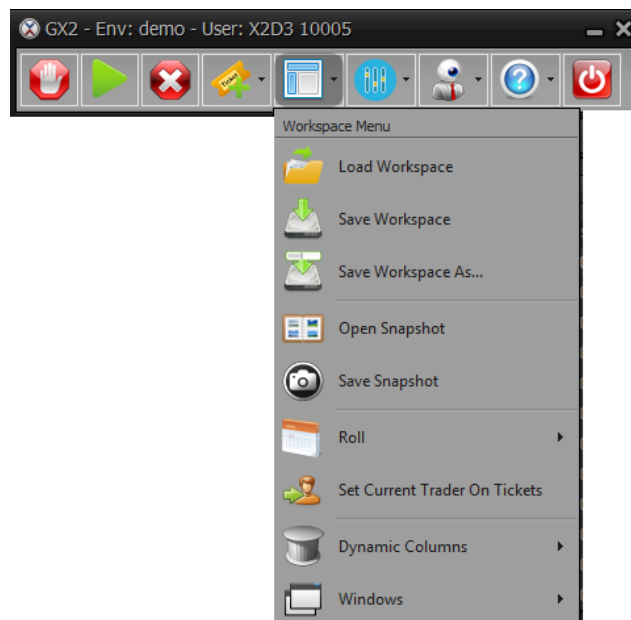
- The Roll Instrument dialog allows you quickly roll contracts from expiration to expiration for all tickets saved in you Fast Trade windows. Add the Product Bases that you'd like to roll from the Available Product Bases list to the Selected Product Bases list. Next, select the expiration you'd like to roll from in the Current Expiration drop-down. Then select the expiration you wish to roll to in the Roll to Expiration drop-down. Click OK to execute the roll. Rolling the individual legs will not update the predefined spreads. Predefined tickets can be updated by selecting Roll Predefined Tickets.

Dynamic Columns

- Allows the user to choose which columns to view if the Fast Trade Corral or Spread Tickets windows are reduced in size.

Windows

- Reopen windows that have been closed.





Settings and Parameters Menu

Settings

Skins: Customize your experience by selecting one of the many skins available.

Preferences

♦ **Fill Sound:** Set a custom fill sound by selecting any .wav file. The wave file will be copied to C:\Users\[USERNAME]\AppData\Roaming\GX2\Sounds automatically. Click the Restore Default button to use the default sound.

♦ **Disconnect Sound:** Set a custom sound that will play if the client loses connection. The wave file will be copied to C:\Users\[USERNAME]\AppData\Roaming\GX2\Sounds automatically. Click the Restore Default button to use the default sound.

♦ **Options**

- ◇ Disable spread ticket through the market warning
 - * Checking this box disables through the market warnings for spread tickets.
- ◇ Disable “Cancel All” warning message
 - * Checking this box disables warning messages when the cancel all button is clicked in the Navigator.
- ◇ Save snapshot on disconnect
 - * Checking this box will cause the client to automatically save a snapshot whenever the client is disconnected.
- ◇ Show Calculate Level button on ticket
 - * Enables the Calculate button on the ticket entry dialog. Clicking this button opens a window that allows you to specify a price for each leg as an input to calculate a level for the ticket.
- ◇ Number of Spread Tickets and Strategy windows
 - * Create up to 5 Spread Ticket as well as 5 Strategy windows. Each window can have a unique set of columns, sorting and filters and will be saved in the workspace.
- ◇ Automatically save snapshot every xx minutes.
 - * A snapshot will automatically be taken every 15, 30, or 60 minutes and saved as “Autosave.Snapshot.xml” in the Snapshot folder. Setting the value to 0 disables the feature.
- ◇ Show 10 levels of Depth.
 - * Allows users to view 10 levels of depth in the single fast trade corral. The user must save the workspace and restart the trading client to see all 10 levels

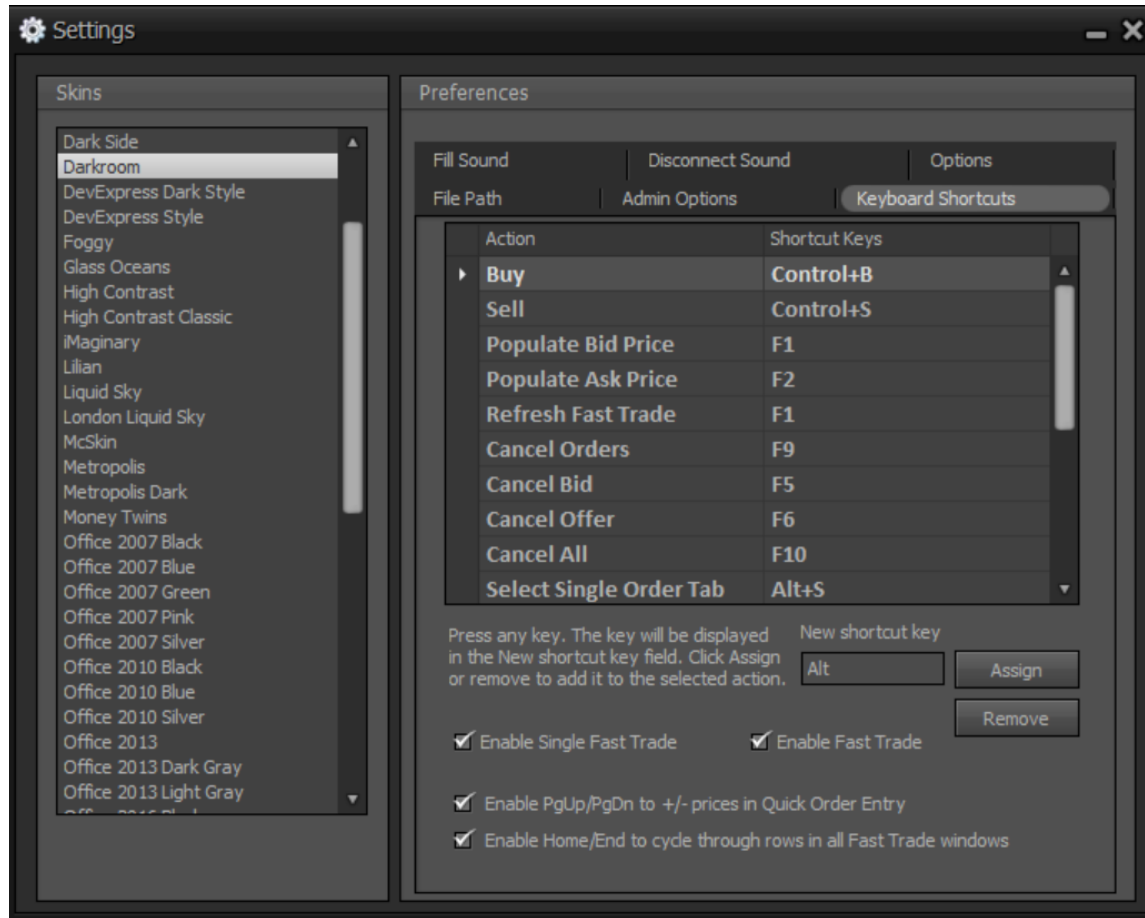
Note: All settings are saved in the workspace. Make sure you save after making changes.

Settings (continued)

File Path: Allows user to select a custom location for the Workspaces and Tickets folder. Also allows user to specify a default workspace to open when the application launches.

Keyboard Shortcuts: User can set up keyboard shortcuts for a variety of actions in the Quick Order Entry section of the Single Fast Trade window.

Note: All settings are saved in the workspace. Make sure you save after making changes.



Futures Implied Yield Parameters see [Futures Implied Yield Parameters](#)

Order Size Limits For Tickets

Allows the user to set their own “fat-finger” limits for each product that can be used in a spread.

Settlement Data

Displays settlement info, DV01, CUSIP for instrument.

A Note on Grids in ExMode

The grids in GX2 are quite powerful. They give the user the ability to sort, sort on multiple columns, filter, search and group. Right-clicking the header row of any grid brings up the following context menu that unleashes the power of the grid.

