Trading Functionality Guide

Version 1.3

Updated June 2026

Markets Evolved.

PURPOSE

This Functionality Guide provides an overview of trading functionality supported by CIX and will be updated as new functions and features are implemented.

1.0 Overview

1.1 Contact Information

The CIX market operations team support is available daily from 6:30 AM ET to 8:30 PM ET, Monday to Friday.

The market operations team can be reached at: operations@thecix.ca and/or through our client service support line.

Overview

The CIX operates three near-continuous limit order books. Canadian securities available for trading are all securities across the TSX, TSX Venture, CSE and CBOE Canada marketplaces.

Three CIX order books in operation are as follows:

CIX ASPEN VERT

CIX ASPEN VERT operates a near-continuous limit order book in a visible market, utilizing optimized matching to enable larger posted size and tighter spreads. Key features include:

- Take/Make Fee Structure
- Fractional Trading
- Extended Hours

CIX ASPEN

CIX ASPEN operates a near-continuous limit order book in a visible market, utilizing optimized matching to enable larger posted size and tighter spreads. Key features include:

- Make/Take Fee Structure
- Extended Hours

CIX Midpoint

CIX Midpoint operates a near-continuous limit order book in a dark market, leveraging discrete trade matches, milliseconds apart, calibrated per name for minimal post trade price impact. Key features include:

- Pay/Pay Fee Structure
- Only interacts with other dark, midpoint orders

Key features across all three order books are summarized in the following table.

1.2 CIX Order Books — Key Highlights Summary

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2.0 Market Access

2.1 The Hours of Operation

CIX will be open for operation on all Canadian business days. Canadian holiday schedules will be posted annually on our CIX website.

The hours of operation for the CIX order books are as follows:

CIX ASPEN VERT

6:30 AM ET – 7:00 AM ET: Pre-Opening Stage
Orders may be entered, but will not be executed during the pre-opening stage.

7:00 AM ET – 8:00 PM ET: Continuous Trading Session
All regular order types referenced within our CIX ASPEN order types & features information, are accepted between the hours of 9:30AM ET and 4:00PM ET in the CIX ASPEN VERT order book.

Within extended hours prior to 9:30AM ET and post 4:00PM ET, market, limit, iceberg, day and IOC orders will be supported.

New orders, change former orders (CFO's) cancellations are permitted throughout the pre-open, continuous and extended hours sessions between 6:30 AM ET and 8:00 PM ET.

CIX ASPEN

6:30 AM ET – 7:00 AM ET: Pre-Opening Stage
Orders may be entered, but will not be executed during the pre-opening stage.

7:00 AM ET – 8:00 PM ET: Continuous Trading Session
All regular order types, referenced within our CIX ASPEN order types & features information, are accepted between the hours of 9:30 AM ET and 4:00 PM ET in the CIX ASPEN order book.

Within extended hours prior to 9:30 AM ET and post 4:00 PM ET, market, limit, iceberg, day and IOC orders will be supported.

New orders, CFO's, cancellations are permitted throughout the pre-open and continuous sessions between 6:30 AM ET and 4:00 PM ET.

CIX Midpoint

6:30 AM ET – 9:30 AM ET: Pre-Opening Stage
Orders may be entered, but will not be executed during the pre-opening stage.

9:30 AM ET – 4:00 PM ET: Continuous Trading Session
All regular order types, referenced within our CIX Midpoint order types & features information, are accepted between the hours of 9:30 AM ET and 4:00 PM ET in the CIX Midpoint order book.

New orders, CFO's, cancellations are permitted throughout the pre-open and continuous sessions between 6:30 AM ET and 4:00 PM ET.

2.2 Subscriber Acceptance

Access to trading on the CIX trading books is available to all CIX Subscribers. Subscribers must be Canadian Investment Regulatory Organization (CIRO) dealer members in good standing, and their staff who enter orders on CIX must be CIRO Registered Representatives. Subscribers must execute all applicable CIX agreements before being granted access to CIX Systems and must be a CDS Participant or have a clearing arrangement with an entity that is a CDS Participant.

2.3 Connection Protocol

Access to CIX is available through third party technology providers using the Financial Information Exchange (FIX) protocol. Such access is available to Subscribers via communications that are compliant with the FIX API provided by CIX. CIX currently supports FIX 4.2.

3.0 Order Types and Features

3.1 Order Duration – Time in Force Details

Day orders, Immediate or Cancel (IOC) and Good Til Time instructions will be accepted.

1. **Day:** Day orders are accepted across all three order books.
2. **Immediate or Cancel (IOC):** IOC orders participate in exactly one match cycle and will either be fully filled, partially filled with unfilled remainder cancelled back, or cancelled back with nothing done. This means that IOC orders may trade against other IOC orders and be the passive side of the trade (e.g. Buy IOC order joins the bid, and executes against a marketable sell IOC order received later, but within the same match interval). IOC orders are accepted across all three order books.
3. **Good Til Time (GTT):** GTT orders must be entered with a specific time of expiry (Expire Time), represented in UTC up to millisecond accuracy. Good till time orders are accepted within CIX Midpoint order book only.

3.2 CIX ASPEN and VERT Order Books

The following order types are acceptable orders to be submitted into the CIX ASPEN order books:

1. Limit Order

A limit order type is a standard limit order to buy or sell a security at a specific price equivalent to, or better than the limit price.

A limit order will match anywhere within the best bid and offer, subject to the specified limit price. CIX ASPEN has randomized discrete matching intervals, calibrated per symbol.

There are no minimal resting requirements within CIX ASPEN price limit orders and day or IOC time in force instructions are allowed.

IOC orders participate in exactly one match cycle and will either be fully filled, partially filled with unfilled remainder cancelled back or cancelled back with nothing done.

A limit order will interact with other CIX ASPEN order types only and does not interact with CIX dark order types (midpoint peg orders).

2. Market Order

A market order type is a standard market to buy or sell a security immediately at the best available price within the CIX ASPEN order book, anywhere between the best bid and best offer.

CIX ASPEN has randomized discrete matching intervals, calibrated per symbol.

There are no minimal resting requirements within CIX ASPEN and day or IOC time in force instructions are allowed.

IOC orders participate in exactly one match cycle and will either be fully filled, partially filled with unfilled remainder cancelled back, or cancelled back with nothing done.

A market order will interact with other CIX ASPEN order types only and does not interact with CIX dark (midpoint peg orders).

Pegged Orders

3. Primary Peg Order

A primary peg order is a displayed passive order where buy orders peg to the protected national best bid (NBB) and sell orders peg to the protected national best offering (NBO).

A primary peg order will match at the near touch side of the protected NBBO subject to the limit price. Primary peg orders are used by Fractional Liquidity Providers (FLPs) in order to provide liquidity on fractional and odd lot orders within the CIX ASPEN VERT order book. CIX ASPEN has randomized discrete matching intervals, calibrated per symbol.

There are no minimal resting requirements within CIX ASPEN and day or Immediate or Cancel (IOC) time in force instructions are allowed.

IOC orders participate in exactly one match cycle and will either be fully filled, partially filled with unfilled remainder cancelled back, or cancelled back with nothing done.

A primary peg order will interact with other CIX ASPEN order types only and does not interact with CIX dark order types (midpoint peg orders).

EXAMPLE

Primary Peg Buy Order Example	QTY	BID	ASK	QTY
NBBO	10,000	$7.00	$7.05	10,000
CIX ASPEN – Primary Peg	5,000	$7.00	$7.05	10,000

Order entry result: The primary peg order is submitted to the order book, joining NBBO.

Market Quote Change	QTY	BID	ASK	QTY
NBBO	9,000	$7.02	$7.05	10,000
CIX ASPEN – Primary Peg	5,000	$7.02	$7.05	10,000

Order entry result: The primary peg order is updated within the order book to $7.02, joining NBBO.

Note: Primary peg orders will adjust by one tick increment in the event it would lock a market quote.

4. Market Peg Order

A market peg order is a non-displayed aggressive order where buy orders peg to the protected national best offering and sell orders peg to the protected national best bid.

CIX ASPEN has randomized discrete matching intervals, calibrated per symbol.

There are no minimal resting requirements within CIX ASPEN and day or IOC time in force instructions are allowed.

IOC orders participate in exactly one match cycle and will either be fully filled, partially filled with unfilled remainder cancelled back, or cancelled back with nothing done.

A market peg order will interact with other CIX ASPEN order types only and does not interact with CIX dark order types (midpoint peg orders).

Market peg orders are non-displayed orders on ASPEN.

EXAMPLE

Market Peg Buy Order Example	QTY	BID	ASK	QTY
NBBO	10,000	$7.00	$7.05	10,000
CIX ASPEN – Market Peg	5,000	$7.05		

Trade Match:

QTY	PRICE
5,000	$7.05

Order entry result: The market peg buy order is submitted to the order book, pegged to the national best offer resulting in a trade match on 5,000 shares.

Specialized Order Types/Markers

5. Post Only – Add Liquidity Only (ALO) Order

Add liquidity only orders (ALO) will post only upon order entry and only interact with other orders if the ALO order adds liquidity to the order book.

Eligible ALO order types include limit orders, primary-peg orders with day time in force instructions.

ALO orders can specify MaxFloor settings.

Post Only – ALO – Add Liquidity Order Example	QTY	BID	ASK	QTY
NBBO	10,000	$5.00	$5.05	5,000
CIX ASPEN – ALO	5,000	$5.00	$5.05	5,000
NBBO	15,000	$5.00	$5.05	5,000

Note: If contra liquidity at the same price is in the order book at the time of receipt of the ALO order, the incoming order is price adjusted by one tick increment.

6. Hidden Limit Order

A hidden limit order is a limit order that is represented in the order book at the Subscriber's limit price in a non-display setting.

Hidden Limit Order Example	Broker ID	Order Type	Time of Arrival	QTY	BID	ASK	QTY
Market Depth	45	Limit	11:11:01	7,000	$11.00	$11.01	5,000
	97	Hidden Limit	11:11:05	9,000	$11.00	$11.01	6,000
	18	Passive Peg	11:11:26	1,000	$11.00	$11.02	1,000

Action: Broker 97 has a $11 hidden limit bid at the quote.

Hidden Limit Result: The hidden limit is not displayed (non-visible) in the ASPEN lit order book and does not have priority over a "displayed" order such as a limit or passive peg limit order at the same price, independent of time of arrival.

7. Iceberg Order

An iceberg order is an order where the Subscriber specifically chooses to conceal the full order size with a defined displayed portion (iceberg) and the balance of shares remaining in reserve.

After the display size is fully executed, shares are replenished with either the static value, specified in MaxFloor or with a random value, depending on Subscriber configuration.

Random Value Display:

If a Subscriber chooses to use FIX Tag 8020 DisplayRange, it is the quantity added and subtracted to the MaxFloor of an iceberg order to define the range from which the iceberg's display volume is randomly chosen. The initial display range will always be in board lots.

For example, if an order quantity has a MaxFloor of 1,000 and a display range of 200, the iceberg will allow randomized display volumes of 800, 900, 1,000, 1,100, or 1,200.
Key feature settings to note:

- MaxFloor settings must be less than the order quantity
- If MaxFloor field is greater than Order Quantity field, MaxFloor is ignored
- MaxFloor is ignored on replaces and orders that are ineligible for display (e.g. cannot change a fully visible order to an iceberg order, or a hidden limit order to an iceberg order)
- If MaxFloor is set to 0 on a visible order, it will cause the entire order to be hidden in the lit book

Iceberg Order (Randomized) Example

	QTY	BID	ASK	QTY
NBBO	1,000	$5.00	$5.10	5,000
CIX ASPEN – Iceberg Order	1,000 (Display Range 200)	$5.05		
NBBO	800	$5.05	$5.10	5,000

Action: Sell order matches into the $5.05 bid for 800 to trade.

	QTY	PRICE		
Match:	800	$5.05		
Iceberg (display) randomized replenishment:	200	$5.05	$5.10	5,000

Iceberg Order (Static) Example

	QTY	BID	ASK	QTY
NBBO	10,000	$5.00	$5.10	5,000
CIX ASPEN – Iceberg Order	5,000 (Display 500)	$5.05		
NBBO	500	$5.05	$5.10	5,000

Action: Sell order matches into the $5.05 bid for 500 to trade.

	QTY	PRICE		
Match:	500	$5.05	$5.10	5,000
Iceberg (display) static replenishment:	500	$5.05		

Note – Mixed Lot Icebergs:

- Mixed lot iceberg orders within the CIX ASPEN VERT order book are accepted as long as the display size is requested in board lot increments. The odd lot portion will fill once the board lot display portion has been fully filled.

8. Bypass Orders

Orders sent that are marked bypass will only interact with the displayed liquidity available and “bypass” any hidden or reserve quantity in the order book.

Bypass Order Example

	Order Type	Hidden / Iceberg	BID	QTY-Displayed	ASK	QTY-Displayed	Order Type
Market Depth							
	Hidden Limit	500	$10.25	-	$10.30	9,500	Limit
	Iceberg	1,200	$10.24	700			
	Limit	-	$10.23	2,500			

Action: If a broker sells 2,000 shares marked as Bypass with a $10.23 limit

Trade Match 1 results: 700 trades @ $10.24

Trade Match 2 results: 1,300 trades @ $10.23

Note – Bypass Orders:

- Bypass orders apply to IOC orders only.

3.3 CIX Midpoint Order Book

The following order types are acceptable orders to be submitted into the CIX Midpoint order book:

1. Midpoint Peg – Day Order

Midpoint peg day orders are order types that only match at the midpoint price between the best bid and best offer.

Midpoint peg day orders have a randomized resting requirement, with randomized discrete matching intervals calibrated per symbol.

Midpoint peg day orders only interact with other midpoint peg orders within the CIX Midpoint dark order book and may be submitted with or without a limit price. Minimum settings are supported.

EXAMPLE

Midpoint Peg Day Order Example

	QTY	BID	ASK	QTY
NBBO	2,000	$5.00	$5.05	2,000
CIX - Midpoint Peg	1,000	$5.025		

Order Entry Result: The Midpoint Peg Buy order is bidding at $5.025, pegged to the midpoint between the best bid and best offer.

2. Midpoint Peg – IOC

Midpoint peg IOC orders are dark orders that match between the best bid and ask with IOC set in the time in force instructions and are automatically cancelled back within 100 milliseconds of receipt if not fully filled. This may mean that a Midpoint peg IOC could cancel back prior to a match against orders subject to a minimum resting period longer than 100 milliseconds, however, this is unlikely in practice.

Midpoint peg IOC orders have a randomized resting requirement with randomized discrete matching intervals calibrated per symbol and only interact with other midpoint peg orders within the CIX Midpoint order book

Midpoint peg IOC orders may be submitted with or without a price limit and with minimum quantity settings supported.

3. Midpoint Peg – Good til Time (GTT)

Midpoint peg orders with a set good til time (GTT) match at midpoint prices between the best bid and best offering.

Midpoint peg GTT dark order types require a specific time of expiry (Expire Time), represented in coordinated universal time (UTC) with up to millisecond accuracy. Midpoint peg GTT orders have randomized resting requirements with randomized discrete matching intervals calibrated per symbol.

Midpoint peg GTT dark orders only interact with other midpoint peg orders within the CIX Midpoint order book and may be submitted with or without a limit price.

Minimum settings are supported.

Midpoint peg GTT dark order ExpireTime is not eligible to be replaced.

Midpoint Peg Good Til Time Order Example

	QTY	BID	ASK	QTY	TIME
Market Quote	2,000	$5.00	$5.05	2,000	10:26:10
Action: 10:26:11, Order Entry to Bid $5.05 limit for 1,000 shares good til 10:26:11:900 (e.g duration of 900 milliseconds (.9 seconds)	1,000	$5.025			
Market Quote update at 10:26:13AM	2,000	$5.00	$5.05	2,000	10:26:13

Presume no quote change or trades between time of order entry and market quote update 10:26:13

Result: Midpoint Peg GTT order for 1,000 shares expires with nothing done after 900 milliseconds

3.4 Order Types and Features Summary

	CIX MIDPOINT	CIX ASPEN	CIX ASPEN VERT
	DARK	LIT	LIT
Limit Order		●	●
Market Order		●	●
Primary Peg Order		●	●
Market Peg Order		●	●
Iceberg Order		●	●
Post Only Add Liquidity Order		●	●
Minimum Quantity	●	●	●
Immediate or Cancel (IOC)	●	●	●
Day Order	●	●	●
Midpoint Peg Day Order (with or without limit)	●		
Midpoint Peg – IOC (with or without limit)	●		
Midpoint Peg – Good Til Time (with or without limit)	●		
Hidden Limit		●	●
Bypass Order		●	●
Broker Attribution and Anonymous	●	●	●
Jitney	●	●	●
OPR Cancellation	●	●	●
OPR Reprice	●	●	●
Directed Action Order	●	●	●
Fractional and Odd Lot Trading			●
Extended Hours		●	●

4.0 Order Markers and Account Types Details

4.1 Order Markers

All CIX markets support the following order markers:

- Regulation ID Tags:
    - *Insider Account (IA)*
    - *Significant Shareholder (SS)*
- Short Marking Exempt
- Short Sale
- Bypass
- Jitney

4.2 Account Types

All CIX markets support the following account types:

- Client (CL)
- Multiple Client (MC)
- Non-Client (NC)
- Bundled (BU)
- Inventory (IN)
- Specialist (ST)
- Options Firm (OF)
- Options Market Maker (OT)

4.3 Broker Attribution

All orders are defaulted to be attributed under a Subscriber's broker identity.

Broker attribution can impact matching priority with broker preferencing recognized in trade matching in CIX ASPEN, ASPEN VERT and MIDPOINT orderbooks.

Subscribers may choose to select their settings from broker attribution to anonymous, should attribution not be desired and the orders will be represented under broker #1 on all public data feeds.

5.0 Matching Process and Priority

5.1 Matching Process

The CIX trade matching mechanism calculates matching schedules based on an overnight optimization process with historical performance measurements from previous day trade matches.

Each security has its own individualized matching schedule that is calculated daily to maximize price stability.

Matching schedules are defined based on minimum and maximum time bands for each security.

CIX ASPEN and VERT orderbooks have a minimum time of 150 microseconds and a maximum time of 900 microseconds for scheduling a trade match event. CIX Midpoint orderbook has a minimum of 200 microseconds and a maximum time of 2 milliseconds for scheduling a trade match event.

CIX Midpoint requires a minimum resting period of time to be eligible to participate in a midpoint match event. The minimum resting period is randomized with a minimum resting period of 200 microseconds and will not exceed 200 milliseconds. There are no minimum resting periods for CIX ASPEN and VERT.

On all three order books, orders are matched in the order that they are received according to matching priority rules within the matching interval, similar to continuous order books, with aggressive orders matching against passive orders. Trades are printed at the end of the individualized matching interval.

The matching process is fully symmetric where all Subscribers are treated equal and do not receive any additional advantages being on a particular side of a trade or based on their client type.

5.2 Matching Priority

Orders are matched on CIX based on price/display/broker/time priority. Broker preferencing applies across CIX ASPEN, ASPEN VERT and dark MIDPOINT orderbooks, except in the case where an order is marked Anonymous or Jitney.

Displayed orders (e.g. limit, primary peg, post only ALO) in the CIX ASPEN order books will always have priority over non-displayed orders (e.g. hidden) at the same price.

Any price changes to an order will impact its priority. Priority will be maintained if display quantity is amended to the lesser amount of the previously displayed quantity (but price remains the same). Priority will be lost if display quantity is increased.

5.3 Price Priority Example

Priority is given to the best priced order: highest bid or lowest offer.

Price Priority

	Broker ID	QTY	BID	ASK	QTY	Broker ID
Market Depth	52	1,000	$20.00	$20.01	900	29
	49	700	$19.99	$20.02	500	18
	97	1,000	$19.98	$20.03	1,500	97

Price Priority Results:

Broker 52 has price priority with the best bid at $20.00

Broker 29 has price priority with the lowest asking price at $20.01

5.4 Broker Priority Example

Priority is applied to an order with the same broker ID at the same price, independent of time priority in the order book.

Broker Priority

	Broker ID	QTY	BID	Arrival Time
Market Depth	49	2,000	$5.00	2:26:05
	52	1,000	$5.00	2:26:20
	97	500	$5.00	2:27:00

Action: Broker 97 enters a new sell limit order at $5.00 for 1,000 shares

Broker Priority Result:

500 shares transact at $5.00 between broker 97 first, even though broker 97 was last in time priority in the best bid queue, prioritizing broker preferencing.

The remaining 500 shares by broker 97 for sale transacts against broker 49.

Note: Broker preferencing applies across CIX ASPEN, ASPEN VERT and dark MIDPOINT orderbooks, except in the case where an order is marked Anonymous or Jitney.

5.5 Display Type Priority Example

Priority is given to an order that is fully displayed over a non-displayed order.

For example, a limit order displayed on the order book has priority over a hidden limit order or an order that has an iceberg with a reserved component to the size.

Display Type Priority

	Order Type	QTY	BID	Arrival Time
Market Depth	Iceberg	Display 1,000 (Iceberg 3,000)	$9.00	1:26:05
	Hidden Limit	5,000	$9.00	1:26:10
	Limit	10,000	$9.00	1:26:15

Action: A new sell order comes into the order book to sell 5,000 shares at limit $9.00

Display Priority Result:

1. Iceberg order displaying 1,000 shares transacts at $9.00
2. Sell order balance of 4,000 transacts against the $9.00 Limit order bidding in full for 10,000
3. Hidden Limit order does not have priority at the same price and the reserve of the iceberg does not have priority at the same price over the fully displayed limit order

5.6 Time Priority Example

Time priority is where priority is applied to the order which arrived first, based on time stamp, when multiple orders are queued at the same price level in the order book.

Time Priority

	Broker ID	QTY	BID	Arrival Time
Market Depth	97	5,000	$3.00	11:11:01
	45	2,500	$3.00	11:11:20
	29	1,000	$3.00	11:11:35

Time Priority Result:

Broker 97 has time priority as it was entered prior to broker 45 and broker 29, at the same price level

6.0 Board Lot Sizes, Standard Trading Price Increments, Minimum Quantity

6.1 Board Lot Sizes

Board lot sizes for the CIX order books are based on the CIRO UMIR definition of standard trading units, factoring in the previous day's closing price of the listing exchange.

$1.00 and up: 100 Shares
$ .10 – $0.99: 500 Shares
Under $0.10: 1,000 Shares
Debentures: $1,000 Face Value

Any lot sizes below the amounts above within these price increments are considered odd lots.

6.2 Standard Trading Price Increments

Standard trading price increments (tick size/increments) are as follows:

$0.50 and above: $0.01
Below $.50: $0.005

6.3 Minimum Quantity & Minimum Quantity Aggregation

Minimum Quantity:

- Minimum quantity settings are available on non-displayed orders only.
- Minimum quantity is supported on any orders marked with IOC time in force instructions, market pegs, or hidden limit orders.
- Minimum quantity can be in board lots only.

Minimum Quantity Aggregation:

- Subscribers may also choose to set minimum quantity settings on non-displayed orders to allow for the aggregation of contra-side interest to meet minimum quantity requirements.

7.0 Fractional and Odd Lot Trading

7.1 Fractional and Odd Lot Trading

- Fractional and odd lot trading is available in a combined non-displayed fractional and odd lot terms book within CIX ASPEN VERT.
- There will be at least 1 FLP on all eligible securities with multiple FLPs per eligible security supported as part of the program. CIX supports one FLP trader ID per subscriber only and not multiple FLP trader IDs per subscriber.
- The CIX Fractional Program is supported by CIX Participants who apply and are approved as fractional and odd lot liquidity providers in accordance with the terms of the CIX Fractional Program.
- FLPs provide liquidity via primary peg orders
- Fractional and odd lot trading will follow price/broker/time matching priority.
- Primary peg orders are pegged to the Protected NBBO, where active orders only execute with the FLP based on price or same broker through broker preferencing. Time priority would come into play if multiple fraction or odd lot limit orders are resting in the order book and the quote changes with the resting orders becoming marketable for a trade match.

CIX ASPEN VERT order book

Fractional Standard Quantity Requirements

- CIX accepts orders in fractional quantities and supports fractional trades up to six decimal places within the CIX ASPEN VERT order book.
- Any share quantity less than one whole share is considered a fractional quantity.

Fractional Hours of Operation

- Fractional orders are eligible for the entire duration of the CIX ASPEN VERT order book session.

Fractional and odd lot trade/Fractional Liquidity Provider (FLP)

FLPs provide liquidity by maintaining primary pegged orders in their assigned symbols of responsibility to ensure a two-sided market for odd lot and fractional orders throughout the trading day within the ASPEN VERT order book.

Incoming fractional and odd lot orders routed to the ASPEN VERT order book are eligible to match against the FLP based on the NBBO.

EXAMPLE

Symbol XYZ	BROKER	QTY	BID	OFFER	QTY	BROKER
NBBO		1000	$10.00	$10.05	5000	
ASPEN VERT	57	1000	$10.00	$10.05	1000	59

ASPEN VERT

Fractional-Odd Lot Book	BROKER	QTY	BID	OFFER	QTY	BROKER
Assigned FLP - Broker 41	41	10000 (pegged)	$10.00	$10.05	10000 (pegged)	41

Fractional Odd Lot Order Action

- A fractional odd lot is entered by broker 57 to buy 102.25 XYZ at market

Result:

- Board lot of 100 shares will match on the ASPEN VERT board lot book
- 2.25 shares will match against the assigned FLP's (broker 41) pegged order in the ASPEN VERT fractional odd lot book, based on the NBBO

Fractional and odd lot trade/Fractional Liquidity Provider (FLP) - Broker Preferencing

- Fractional and odd lot trading will follow price/broker/time matching priority. Therefore Subscribers entering fractional trades within the CIX ASPEN VERT Fractional Odd lot order book may match with their own broker in accordance with the matching priority above.
- Broker preferencing applies over the assigned FLP when a broker is a valid FLP.
- There may be multiple pegged orders on the same symbol, with one assigned FLP per symbol, where broker preferencing has priority over the assigned FLP.

EXAMPLE: MARKETABLE FRACTIONAL ORDERS – BROKER PREFERENCING

Symbol XYZ	BROKER	QTY	BID	OFFER	QTY	BROKER
NBBO		1000	$10.00	$10.05	5000	
ASPEN VERT	57	1000	$10.00	$10.05	1000	59

ASPEN VERT

Fractional-Odd Lot Book	BROKER	QTY	BID	OFFER	QTY	BROKER
Broker 41 - Assigned FLP	41	10000 (pegged)	$10.00	$10.05	10000 (pegged)	41
Broker 92 as FLP	92	10000 (pegged)	$10.00	$10.05	10000 (pegged)	92

Fractional Odd Lot Order Action

- A fractional odd lot order is entered by broker 92 to buy 2.25 shares at market

Result:

- Broker 92’s buy order will match against Broker 92’s pegged order based on the NBBO and has priority over the assigned FLP’s Broker 41’s pegged order

7.2 End of Day – Fractional Imbalance (FI) Determination

- CIX provides a FIX drop copy and has implemented a Fractional subledger system which allows Subscribers to receive real-time messaging throughout the trading session. The FIX drop copy and the Fractional subledger both provide net trading share count summary information per symbol per Subscriber.
- To satisfy their end of day fractional imbalance, Subscribers clean up their fractional imbalance before the end of the CIX ASPEN VERT trading session:

Clean up trade process:

- Subscribers round up the end of day imbalance to buy/sell at current market pricing within best bid and offer, from the FLP , to satisfy one whole share amount anytime before the end of session.
- To identify a clean up order, the subscriber sends a fractional clean up order (FRC) at market.
- Until the launch of extended hours trading, Subscribers can clean up their fractional imbalance between 4 and 5PM ET.

Clean up trade for Extended Hours Trading- 8 to 8:10pm - Requires new order type (FRC).

FRC Definition

- FRC orders are fractional orders, priced at market, and only intended to execute for fractional clean up purposes.
- FRC orders will always be a fraction in quantity and execute at the derived fractional closing price methodology.

Process - For Extended Hours (Evening Session)

- Subscribers round up the end of day imbalance to transact on the Fractional Imbalance (FI) at the derived fractional closing price through broker preferencing or from a FLP, with orders submitted as FRC at market.
- The FRC order is submitted after 8pm and upon filling, satisfies the imbalance to one whole share amount in a fractional clean-up extension period.

Derived Fractional Closing Price Methodology

1. If the CIX ASPEN VERT last sale price is within the last 30 minutes of the trading session, the derived fractional closing price will reference the last sale price.
2. If there is no last sale price within the last 30 minutes of the trading session, the derived fractional closing price is set to the **midpoint** of the following time weighted average price (TWAP) reference points between the best bid and offerover the last 30 minutes:
   i. TWAP of the best bid during the last 30 minutes of the trading session.
   ii. TWAP of the best offering during the last 30 minutes of the trading session.

EXAMPLE

TIME	Best Bid	Best Offer	Time Duration (seconds)	
7:30:00	$5	$5.25	900	
7:45:00	$5.05	$5.25	600	
7:55:00	$5.1	$5.25	300	
	TWAP Bid	**TWAP Offer**	**Total Duration (seconds)**	**Derived Fractional Closing Price (Midpoint TWAP Bid Offer)**
	$5.033333	$5.25	1800	$5.141665

3. If there is no last sale price or a BBO in the last 30 minutes, the derived fractional closing price is set to the last fractional traded price.
4. If there is no last sale price and a one-sided quote in the last 30 minutes, the derived fractional closing price is set to the last fractional traded price.

Derived Fractional Closing Price Logic – Summary Table

Timing Scenario	Derived Fractional Closing Price Logic
In last 30 minutes, if a last sale price occurs	Last sale price used
In last 30 minutes, if there is a BBO and no last sale	Midpoint of TWAP best bid offer used
In last 30 minutes, if there is no last sale price or BBO	Last fractional trade price used
In last 30 minutes, if there is no last sale price and a one-sided quote	Last fractional trade price used

Regular Trading Session - Clean Up Trade Example:

CIX ASPEN VERT Market by order book	Broker ID	QTY	BID	ASK	QTY	Broker ID
Symbol ABC	18	100	$74.95	$74.96	100	97
	45	700	$74.94	$74.97	500	29
CIX ASPEN VERT Fractional/Odd Lot book	45	1.235500	$74.90	$75.00	1.500000	45
	29	0.750000	$74.89	$75.01	0.269500	97
	29	0.557100	$74.88	$75.05	0.333355	49

Example:
Broker 97 bought 1,105.750000 ABC and sold 910.500000 ABC on the day

Broker 97 **Net imbalance determination:** Long 195.250000 ABC

Imbalance Result:

- Broker 97 has a fractional imbalance of 0.25 ABC at the closing of the trading session.
- 0.25 is less than one whole share and therefore ineligible for CDS settlement.
- Broker 97 would clean up their fractional imbalance to round out to one whole share amount by an additional 0.75 shares.

End of Day Imbalance - Clean up trade Example:

Prior to closing - Clean up within the market quote

Action: Broker 97 rounds up to buy .750000 ABC anytime before closing, to 1 whole share at current market pricing at the best bid offer quote.

Clean Up Trade: Broker 97 submits buy order on .750000 shares at market to clean up imbalance using (Presume Broker 45 is a FLP)

Result: Assigned FLP Broker 45's pegged order matches against the fractional clean up order based on the NBBO at the time of order entry.

Broker ID	QTY	PRICE	Broker
97	0.75	$74.96	45

Notes:

1. Fractional share imbalances will always range between plus or minus one whole share amount, up to six decimal places.
2. Subscribers are responsible for tracking their own corporate administration on: shareholder voting rights, potential round up/down clearing matters on /corporate actions, DRIP programs, dividend amount distributions with regards to client fractional share ownership.

8.0 Extended Hours

Canadian securities available for trading in Extended Hours are all public securities across the TSX CBOE Canada marketplaces.

8.1 CIX ASPEN and ASPEN VERT - 7:00 AM ET - 8:00 PM ET

CIX operates a continuous trading session that is extended beyond traditional regular trading session hours and available for Subscribers from 7:00AM ET until 8:00 PM ET within the CIX ASPEN and ASPEN VERT order books

Trades occurring within the CIX ASPEN and ASPEN VERT orderbook between 4:00 PM ET and 8:00 PM ET consist of trading activity that clears through CDS in both continuous net settlement (CNS) and trade for trade (TFT) processes.

8.2 Prior to 6:30 PM ET - Continuous Net Settlement (CNS)

All trades prior to 6:30 PM ET are cleared via CDS as CNS trades for regular T+1 settlement.

8.3 Post 6:30 PM ET – Trade for Trade (TFT)

All trades occurring after 6:30 PM ET are cleared through TFT clearing protocols with CDS, which are processed the next business day at 7:00 AM ET for T+1 settlement as of the previous trading date session.

8.4 Order Types Supported in Extended Hours

Only Market, Limit and Iceberg orders are supported in extended hours prior to 9:30 AM ET and post 4:00 PM ET. Day and IOC orders are accepted.

9.0 Order and Trade Reporting, Clearing Settlement Procedures

All trades, with the exception of fractional quantities, are reported to the Canadian Depository for Securities Limited (CDS) within CIX trade files.

When a subscriber's trade rounds out a previously recorded fractional share quantity to a whole share, the new fractional amount created by the trade (if applicable) is recorded in the fractional ledger, and the newly whole share is reported in the next CDS trade file.

Trades up until 6:30 PM ET clear via CDS as continuous net settlement (CNS) regular settlement trades.

Trades between 6:30 PM ET and 8:00 PM ET clear via CDS as trade for trade (TFT) transactions. TFT clearing transactions are processed next morning by CDS at 7:00 AM ET as of the previous trading session, for regular T+1 settlement.

All orders and trades are reported to the TMX Information Processor.

10.0 Marketplace Participant Protection Procedures

10.1 Self-Trade Prevention and Management

CIX provides the following order features that prevent two orders from the same client executing against each other:

Self Trade Prevention

1. **Cancel Newest Order:** Subscribers can choose to cancel their newest incoming order to prevent trading against a pre-established resting order in the book.
2. **Cancel Oldest Order:** Subscribers can choose to cancel their oldest order resting in the order book to prevent trading against a new incoming order.
3. **Cancel and Decrement:** If a Subscriber sends orders in different share quantities, cancel and decrement results in the cancellation of the smaller order with a corresponding adjustment decreasing in size on the larger order.

Self Trade Management

4. **Trade and Suppress:** Subscribers have the option to suppress the trade from the public market data feed, however, the trade will still be reported.

10.2 Order Protection Rule (OPR)

CIX supports order protection types ranging from OPR cancellation, reprice and/or Directed Action Orders. Settings are defaulted to OPR Reprice types, should the Subscriber not specify.

1. **OPR Cancellation:** Orders designated as OPR cancel only allow trading to occur at prices better than or at the protected NBBO, before cancelling the order back to the Subscriber to prevent an OPR trading violation. OPR cancel orders will be cancelled if the limit price will lock or cross markets.
2. **OPR Reprice:** Orders designated as OPR reprice only allow trading to occur at prices better than or at the protected NBBO, before dynamically repricing the order to the maximum price level permitted within the order's limit based on the protected NBBO. OPR reprice orders will be repriced if the limit price will lock or cross markets.
3. **Directed Action Orders (DAO):** Directed action orders are sent with a DAO marker, where the Subscriber is opting out of the CIX OPR and the responsibility to prevent marketplace trade through violations are assumed by the Subscriber.

DAO markers can lead to potentially locked/crossed markets or trade matching outside of the national best bid/offer.

Directed Action Order Examples (DAO)

Locked Market	BOOK	QTY	BID	ASK	QTY
	NBBO	700	$5.05	$5.09	700
	ASPEN VERT	500	$5.05	$5.10	1000

Action: Subscriber enters a buy order of 1,000 shares at limit $5.09 to CIX ASPEN VERT, marked as DAO.

DAO Result: The Subscriber's order posts within ASPEN VERT order book at limit $5.09 for 1,000, locking the market with $5.09 offered on another available venue.

Trade Through/ Crossing Market	BOOK	QTY	BID	ASK	QTY
	NBBO	1,000	$5.05	$5.07	100
	ASPEN VERT	900	$5.05	$5.08	100

Action: Subscriber enters a buy order for 100 shares at a limit of $5.08 on CIX ASPEN VERT, marked as DAO.

DAO Result: The Subscriber's order transacts at $5.08 on CIX ASPEN VERT, trading through a better offer of $5.07 on another available venue.

10.3 CIX Price Thresholds

CIX price thresholds are set in compliance with CIRO requirements. Thresholds are triggered for specific securities when an order is received for that particular security beyond the price reference threshold, comparing the security price to the following reference prices:

1. National Last Sale Price for the particular trading day
2. National Last Sale Price on the most recent minute interval

CIX price thresholds are as follows:

Security Class	Price Category	Threshold Level
Securities not subject to single stock circuit breakers (SSCB)	$0.00 > – < $0.50	300%
	$.0.50 ≥ – < $1.00	50%
	$1.00 ≥ – < $5.00	30%
	$5.00 ≥ – < $10.00	20%
	$10.00 ≥ – < $30.00	15%
	$30.00 +	10%
Exchange Listed Debt	All price categories	20%
Exchange Traded Funds	All price categories	10%
Leveraged Exchange-Traded Funds	All price categories	Multiple of Leverage multiplied by 10%
Securities subject to SSCBs (excluding ETFs)	All price categories	10%

10.4 Single Stock Circuit Breakers (SSCBs)

CIRO's single stock circuit breakers (SSCB) may be engaged when securities have unexplained and/or rapid price movements that potentially harm a fair and orderly market.

CIRO will apply the SSCB to a S&P/TSX Composite Index constituent and/or an exchange traded fund (ETF) in the event of a 10% price move on a specific security within a 5-minute period. Trading in the security impacted will be halted for 5 minutes and may be considered for an additional time halt of 5 minutes.

10.5 Cancel on Disconnect

CIX supports cancel on disconnect for a Subscriber's FIX order entry session. Once enabled by a Subscriber, the Subscriber's orders will be cancelled immediately – should the Subscriber's FIX connection between the Subscriber and the CIX be disconnected.

11.0 Trade Error Policy and Procedures

CIRO has the authority to instruct CIX to cancel and/or amend trades that have transacted on CIX trading books.

If and when a Subscriber executes an erroneous trade, the Subscriber may contact the CIX market operations team to request a cancellation, or amendment, of the trade:

1. Upon request, the market operations team may contact the counterparty to the trade transaction and request a cancellation or amendment.
2. If a trade cancellation or amendment is agreed upon, the CIX will contact CIRO for approval in order to finalize the erroneous trade process for both parties.

CIX is permitted to cancel or amend a trade that resulted from a system or technological failure subject to CIRO approval.

12.0 Revision History

Version	Date	Change
1.0	March 2025	Initial Functionality Guide Version
1.1	September 2025	1.2 Table Summary: Edited table for displayed vs non displayed orders 3.1 GTT – GTT edited to support ExpireTime. 3.2 #3 – Primary Peg: Added note regarding primary peg adjusting for tick increment 3.2 #4 – Market Peg: Edited as non display only and do not adjust for tick increment 3.2 #5 – Post Only ALO: Edited as displayed and does adjust for a tick increment if required 3.2 #7 Iceberg Description: MaxFloor behavior edited; added DisplayRange field to supplement for randomized iceberg refresh 5.1 Matching Process: Updated matching schedule bands 7.1 MinQty & MinQty Aggregation: Added MinQty and MinQty aggregation support 7.2 Fractional & Odd Lot Trading: Added matching priority context and number of FLPs; added fractional broker preferencing matching priority; edited FRC clean up process via broker preferencing or FLP. General edits for consistency and syntax improvements.
1.2	November 2025	1.1, 1.3, 2.1, Section 8: Updated extended hours for both ASPEN and ASPEN VERT 2.1, 8.4: Updated eligible orders supported in extended hours (DAY, IOC, Market, Limit, Iceberg) 5.1: Matching Period Midpoint resting period range 7.2 Fractional & Odd Lot Trading: Updated Fractional trading examples with multiple FLPs on one symbol and displaying auto execution and broker preferencing scenarios General edits for consistency and syntax improvements.

1.3	June 2026	1.1-2: Removed odd lot/board lot interaction description from ASPEN 1.3: Updated matching priority, removed odd/board lot interaction, removed odd lots from ASPEN 3.1: Defined IOC in full context 3.2-3: Noted Primary Peg orders being used by FLPs 3.2-8: Added note bypass orders for IOC only 3.3 -1,2,3: Removed maximum quantity; updated expire time wording in GTT 3.3 3.4: Removed maximum quantity; removed odd lot/board lot interaction; added Jitney to order types and features summary 4.1: Added Jitney to Order markers 4.3 & 5.4 Added note confirming broker preferencing across all three orderbooks 5.1: Added further context to matching process 5.2 Edited matching priority typo and provided further context to matching priority 5.4: Added note on broker preferencing not applying to anonymous or jitney order markers 6.3 Added section point to note Minimum Quantity and Minimum Quantity Aggregate more clearly 7.1 Removed Odd Lot/Board Lot interaction 7.2 Updated Fractional and Odd Lot Trading functionality description and examples; removed auto execution 8.0 Extended Hours: Noted supporting TSX and CBOE Canada listings in Extended hours to start 10.2 Order Protection Rule: Edited settings are defaulted to OPR Reprice order types, should the subscriber not specify 10.2-3: Provided further context to the impacts on DAO orders displaying locked/crossed markets 10.4 Removed sentence on trades beyond 5% of trigger price would result in cancellation General edits for consistency and syntax improvements

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