



# **INVESTORS EXCHANGE USER MANUAL**

Version 1.00

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# INTRODUCTION

This document provides information about the Investors' Exchange LLC ("IEX", the "System," or the "Exchange") and IEX Services LLC ("IEX Services"), which is the outbound routing broker for the Exchange. The Exchange and IEX Services are each wholly-owned by IEX Group, Inc.

Information contained in this document is subject to change at any time. For the latest updates, please refer to <http://iextrading.com/>.

## How IEX Operates

The Exchange is a fully automated electronic limit order book for orders to buy and sell National Market System ("NMS") equity securities with a continuous, automated matching function. The Exchange also offers routing functionality through IEX Services with direct connectivity to all venues displaying Protected Quotations, as defined by Regulation NMS. Users connect to the System via FIX order entry gateways using the industry standard FIX 4.2 protocol, with IEX specific extensions. The order entry gateways validate incoming orders, convert them to an internal proprietary format, and forward them to the appropriate matching engine.

At the core of the System are several matching engines. Each matching engine handles a set of symbols, which can be reallocated to balance the load across the System. Each matching engine compares the limit price of an incoming order with the price of resting (i.e. booked) limit orders on the IEX Order Book and the price of other markets' displayed quotes. If the order is immediately marketable against the IEX Order Book, and there is interest available on the IEX Order Book at a price equal to or better than the consolidated quote, an immediate match is made and communicated back to Users. If another market is displaying a better quote, the order will be handled depending on the User's instructions (e.g., forwarded to the other market to attempt to fill the order, posted to the IEX Order Book, canceled, etc.).

Aggregate top of book market data is available via the IEX TOPS protocol. The Exchange also offers historical data through the IEX website.

Users or their clearing firms may request copies of their executions via drop copies using the IEX FIX protocol. Refer to the [IEX FIX Specification](#) for more details.

## Technology

The trading platform is located in a CenturyLink data center (NJ2X) in Weehawken, NJ. Member, Service Bureau, Data Recipient and Extranet Provider connectivity into the Exchange may occur from an IEX POP (point of presence). IEX offers two POPs located in data centers in Secaucus, NJ operated by Equinix and Carteret, NJ operated by Verizon. The POP in Secaucus, NJ is the "primary" or "hot" POP, while the POP in Carteret, NJ is the "secondary" or "cold" POP. Each POP is designed to provide Users with 350 microseconds of latency from the POP to the primary trading platform.

All data centers the Exchange use provide a high level of security and availability through redundant and reliable environmental control systems (redundant power supplies, on-site backup generators, cooling systems, etc.). Data center personnel are available 24/7 to maintain and service the System.

The Exchange's trading platform is distributed across several servers to maximize throughput, minimize bottlenecks, and allow for simplified scalability. More servers can be added easily to expand system capacity.



# ACCESS TO THE EXCHANGE

## Membership Application

To become a Member of the Exchange a firm must:

- be registered as a broker-dealer;
- be a member of at least one other national securities exchange or national securities association;
- be able to clear trades or must clear through a clearing firm; and
- meet certain additional criteria prescribed by the Exchange and set forth in Chapter 2 of the Exchange's Rules.

The Exchange is available for order entry and execution by Members; non-Members may also gain access to the Exchange through a Sponsored Participant arrangement with a Sponsoring Member firm, in accordance with the Exchange's Rules. Membership and Sponsored Access applications and agreements are available on the Exchange's website.

The Exchange's data is available to Data Recipients with authorized access. The Data Agreement form is available on the Exchange's website, <http://iextrading.com/>.

For more information about becoming a Member, Sponsored Participant or Data Recipient, please contact IEX Market Operations at 646.343.2300 or [marketops@iextrading.com](mailto:marketops@iextrading.com).

## Connectivity

Members of the Exchange and their Sponsored Participants (collectively, "Users") are permitted to electronically send orders to buy and sell securities traded on the Exchange through the use of the IEX FIX API. Users may also send orders through a Service Bureau.

Users are responsible for choosing and implementing connectivity to the primary IEX POP in Secaucus, NJ, to the secondary IEX POP in Carteret, NJ, and to the secondary data center in Chicago, Illinois. Users are strongly encouraged to establish connectivity to both IEX POPs and to the secondary data center to minimize service disruption in the event of an issue at one of the data centers.

IEX supports the following connectivity methods:

- Cross-Connect: Users that are co-located in an IEX POP or the Chicago data center may request an in-house cross-connect from the User's point of presence to IEX.
- Extranet Providers: IEX is currently on-network with various extranet providers. Refer to the [IEX Connectivity Manual](#) for a current list of approved extranet providers.
- Private Line Ethernet: Telecommunications carriers provide a circuit extension from Users in different data centers to an IEX POP or the Chicago data center. Refer to the [IEX Connectivity Manual](#) Carriers section for a list of carriers.

For more detailed information and instructions on how to connect to IEX, please refer to the [IEX Connectivity Manual](#).



# MARKET OPERATION

## Order Types and Related Information

IEX accepts limit orders and market orders. By default, orders are limited to a maximum of 1,000,000 shares or \$30,000,000.00.

Users may submit orders to the Exchange designated with modifiers such as IOC, FOK, Day, Good 'til Extended Day (GTX), System Hours (SYS), Good 'til Time (GTT), IEX Only, Pegged, Non-Displayed, Minimum Quantity, Routable, and/or Intermarket Sweep. Note that IEX Only order types will only execute/post on the Exchange. Note that this is a representative, but incomplete list of order types and modifiers.

Refer to Chapter 11 of the Exchange Rule Book for more information regarding order types, [Investors' Exchange Rule Book](#).

Refer to the [IEX FIX Specification](#) for more details on how various order types are implemented.

Finally, additional information about order types is available on the Exchange's website.

### Minimum Price Variation

The minimum price variation ("MPV") or minimum trading increment for orders priced \$1.00 or greater is \$0.01 and can be executed in increments of \$0.005 (i.e., certain mid-point executions). Orders priced below \$1.00 are eligible for trading in sub-penny increments of \$0.0001.

### Time in Force Values

The term Time in Force (TIF) determines the periods of time during which an order is available for potential execution and shall include:

- IOC - immediate-or-cancel
- FOK - an IOC order where the entire size must be filled, else the order will be canceled
- DAY - available for trading during the Regular Market Session
- GTX - available for trading during the Regular Market Session and Post-Market Sessions, and expires at the end of the Post-Market Session
- SYS - available for trading during System Hours, and expires at the end of the Post-Market Session
- GTT - expires at the earlier of specified expire time or end of the Post-Market Session

### Routing

Users have the option, but are not required, to use the Exchange's affiliated broker-dealer, IEX Services, to route orders to markets other than the Exchange. IEX Only Orders are not routed to other markets. Users may submit orders to the Exchange designated with modifiers such as Route to Take with Re-sweep (a.k.a. Router), Route to Rest with Re-sweep (a.k.a. Router+), or Route to Take (a.k.a. SweepPost). Note that this is a representative, but incomplete list of routing strategies. Refer to specifications noted above for complete details on routing strategy availability.

### Locking or Crossing the Market

Orders that would lock or cross the consolidated market (NBBO) are price slid by the System upon entry. Refer to Rule 11.190(h) of the Exchange Rule Book for more information regarding price sliding, [Investors' Exchange Rule Book](#).



## Throttles

No guarantee is made about system performance, especially during periods of high volatility and order traffic. IEX does maintain a message per second limit at which point new orders and modifies are queued at the order entry gateway. The throttle does not apply to cancels. This limit is subject to change at any time; contact IEX Market Operations for current limitations.

## Trading

### Trading Hours

Orders may be executed on the Exchange or routed away from the Exchange during the Pre-Market, Regular and Post-Market Sessions, collectively known as “System Hours.”

Session	Start and End Time (all times are Eastern Time)
Begin Order Entry Acceptance	8:00 a.m.
Pre-Market Session	8:00 a.m. – 9:30 a.m.
Regular Market Session	9:30 a.m. – 4:00 p.m.
Post-Market Session	4:00 p.m. – 5:30 p.m.

### Holiday Schedule

The Exchange will be closed in observance of the following holidays:

- New Year’s Day
- Dr. Martin Luther King Jr. Day
- President’s Day
- Good Friday
- Memorial Day
- Independence Day
- Labor Day
- Thanksgiving Day
- Christmas

When any such holiday falls on a Saturday or Sunday, the Exchange will follow the direction of the New York Stock Exchange (“NYSE”) with respect to observing the holiday on an alternate weekday. The [IEX Holiday Schedule](#) is subject to change.

## CLEARLY ERRONEOUS EXECUTIONS

Clearly Erroneous Executions are handled in accordance with Exchange Rule 11.270. The Exchange’s rules are available at [Investors’ Exchange Rule Book](#).



# CONTACT IEX

Website	<a href="http://iextrading.com/">http://iextrading.com/</a>
Main Telephone Number	646.343.2000
Sales	646.343.2100 or <a href="mailto:subscriber@iextrading.com">subscriber@iextrading.com</a>
Market Operations	646.343.2300 or <a href="mailto:marketops@iextrading.com">marketops@iextrading.com</a>
System Reliability Engineering	646.343.2200 or <a href="mailto:sre@iextrading.com">sre@iextrading.com</a>
Network Operations	646.343.2245 or <a href="mailto:netops@iextrading.com">netops@iextrading.com</a>
Pricing	<a href="http://iextrading.com/services/">http://iextrading.com/services/</a>
Billing	646.343.2035 or <a href="mailto:accounting@iextrading.com">accounting@iextrading.com</a>
Mailing Address	Investors' Exchange LLC 4 World Trade Center 44 <sup>th</sup> Floor New York, NY 10007

# DATA CENTERS

Refer to the [IEX Connectivity Manual](#).



# REVISION HISTORY

Version	Date	Change
1.00	August 20, 2015	Initial Document