



# US Equities/Options User Manual

Version 3.0.3

November 12, 2015

## Contents

|     |  |   |
|-----|--|---|
| 1   | Introduction .....                       | 3 |
| 2   | Our Mission.....                         | 3 |
| 3   | Become a Member .....                    | 3 |
| 4   | How BATS Works .....                     | 4 |
| 5   | Technology .....                         | 4 |
| 6   | Order Types and Related Information..... | 5 |
| 6.1 | BATS Order Types.....                    | 5 |
| 6.2 | Minimum Trading Increment.....           | 5 |
| 6.3 | Time in Force Values .....               | 6 |
| 6.4 | Routing .....                            | 6 |
| 6.5 | Locking or Crossing the Market.....      | 6 |
| 6.6 | Throttles.....                           | 6 |
| 7   | Connectivity Choices .....               | 6 |
| 8   | Trading Hours .....                      | 7 |
| 8.1 | BZX and BYX Equities Exchanges.....      | 7 |
| 8.2 | EDGX and EDGA Equities Exchanges.....    | 7 |
| 8.3 | BZX and EDGX Options Exchanges .....     | 7 |
| 9   | Holiday Schedule .....                   | 7 |
| 10  | Clearly Erroneous Executions Policy..... | 8 |
| 11  | Obvious Error Policy.....                | 8 |
| 12  | Contact BATS.....                        | 8 |

## 1 Introduction

This document provides background information regarding BZX Exchange, BZX Options Exchange, BYX Exchange, EDGA Exchange, EDGX Exchange, EDGX Options Exchange and BATS Trading (together BZX Exchange, BZX Options Exchange, EDGA Exchange, EDGX Exchange, EDGX Options Exchange and BYX Exchange are collectively referred to as “BATS”).

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

## 2 Our Mission

To make markets better.

BATS Trading, Inc. was incorporated in June 2005 in response to the rapid consolidation in the ECN space. On August 18, 2008, BATS Exchange, Inc.’s registration as a national securities exchange was approved by the Securities and Exchange Commission, and on October 24, 2008, BZX Exchange commenced operations as a national securities exchange. BZX Options Exchange was approved by the Securities Exchange Commission on January 26, 2010 and the first trade occurred on February 26, 2010. EDGX Options Exchange anticipates SEC approval mid-Q3 2015. On August 13, 2010, BYX Exchange’s registration as a national securities exchange was approved by the Securities and Exchange Commission. BYX Exchange commenced operations as a national securities exchange on October 15, 2010. On August 30, 2011, the Securities and Exchange Commission approved BATS BZX Exchange listings rules and on January 24, 2012 BZX Exchange launched its first primary listed security. On January 30, 2014, BATS Global Markets, Inc. completed its merger with Direct Edge Holdings LLC bringing EDGA Exchange and EDGX Exchange into the BATS Global Markets fold making it the largest exchange operator in U.S. Equities on any given day by market share as well as the top exchange for retail-driven liquidity.

BATS believes competition drives innovation, and that there should be a choice between multiple competing electronic markets. The Exchange’s trading platform was built from the ground up to handle high speed, high volume, anonymous, reliable trading of US equities. We continue work rapidly to enhance our product functionality.

**We want to earn your business.**

## 3 Become a Member

To be a Member of the Exchange(s) 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.
- meet certain additional criteria prescribed by the Exchange and set forth in Chapter II of the Exchange’s Rules.

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 application forms, as well as information and forms regarding sponsored access to the Exchange are available on the Exchange's website, <http://www.bats.com/>. Please contact BATS Membership Services at (913) 815-7002 for more information about becoming a Member or a Sponsored participant.

## 4 How BATS Works

Users connect to the system via the **FIX** or **BOE Order Handler** using the industry standard FIX protocol, with BATS Exchange specific extensions, or the proprietary BATS Binary Order Entry protocol. The Order Handler validates incoming orders, converts them to an internal proprietary format, and forwards them to the appropriate matching unit.

At the core of the system are several **Matching Units**. Each matching unit handles a bin of symbols, which can be reallocated to balance the load across the system. The matching unit compares the limit price of an incoming order with the price of resting limit orders on the **Exchange Order Book** and the price of other markets' displayed quotes. If the order is immediately marketable against the BATS Order Book, and the BATS quote is 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 a User's instructions (e.g., forwarded to the other market to attempt to fill the order, posted to the Exchange order book, cancelled, etc.).

**Full depth of book** market data is available via the BATS TCP PITCH or Multicast PITCH protocols. Top of book market data is available through the BATS TCP TOP protocol. Auction only data is available through the BATS TCP Auction Feed protocol. Subject to SEC approval, consolidated quote, trade, and Aggregated Depth At Price (ADAP) information for all BATS US equities book will be available via the BATS One feed. BATS also offers a last sale product that contains only trade information (not quotation information). In addition to the last sale product, BATS offers certain fee-based historical data products through the BATS Member Web Portal.

Users or their clearing firms may request copies of their executions via the BATS FIX DROP protocol. This protocol is offered with an Execution Only or Full Order DROP option.

## 5 Technology

In the first half of 2015, the BYX Exchange, BZX Exchange and BZX Options Exchange trading platforms are being migrated from a CenturyLink data center (NJ2) in Weehawken, NJ to a world-class data center (NY5) in Secaucus, New Jersey operated by Equinix. EDGA Exchange and EDGX Exchange were migrated from the Equinix NY4 data center to the same NY5 data center on January 12, 2015. EDGX Options Exchange will be located in the same NY5 data center as the other platforms effective November 2, 2015 (*pending SEC approval*).

The Equinix data center provides 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.

Fast, reliable data storage is provided by a Storage Area Network (SAN).

## 6 Order Types and Related Information

### 6.1 BATS Order Types

BATS accepts limit orders and market orders. Orders are limited to a maximum of 999,999 shares/contracts.

Users may submit orders to the Exchange designated with modifiers such as IOC, Day, Good 'til Cancel, Good 'til Day, Good 'til Extended Day, Reserve, Odd Lot, Mixed Lot, Book Only (including "Book Only"), Post Only, Partial Post Only at Limit, Pegged, Mid-Point Peg, Discretionary, Non-Displayed, Destination Specific, and/or Intermarket Sweep. Note that Book Only and Post Only order types will only execute/post on the BATS platform that is targeted by the User and Non-Displayed as well as Peg orders are not available on BZX Options Exchange. BZX Exchange also supports Market-on-Open (MOO), Market-on-Close (MOC), Limit-on-Open (LOO), Limit-on-Close (LOC), Late Limit-on-Open (LLOO), and Late Limit-on-Close (LLOC) orders on BZX listed securities to efficiently provide for price discovery at the open and close of core market hours. Note that this is a representative, but incomplete list of order types and that availability per Exchange may vary. Refer to specifications noted below for complete details on order type availability on each Exchange.

Refer to Chapter XI of the appropriate Exchange Rule Book for more information regarding order types:

- [BATS BZX Exchange Rule Book](#)
- [BATS BYX Exchange Rule Book](#)
- [BATS EDGA Exchange Rule Book](#)
- [BATS EDGX Exchange Rule Book](#)

Refer to the appropriate FIX or BOE Specification for more details on how various order types are implemented:

- [BATS US Equities BOE V2 Specification](#)
- [BATS US Equities FIX V2 Specification](#)
- [BATS US Options BOE V2 Specification](#)
- [BATS US Options FIX Specification](#)

Finally, for a more narrated presentation on order types available on BATS' exchanges, refer the following presentations on Brainshark:

- [BATS Exchange Order Type Guide](#)

### 6.2 Minimum Trading Increment

In equities, most orders must be submitted in increments of \$0.01 and can be executed in increments of \$0.005 (i.e., certain mid-point executions). However, some stocks are eligible for trading in sub-penny increments of \$0.0001.

In options, orders must be submitted and will be executed in increments of \$0.01. In addition, certain options rules exist that will restrict displaying quotes in increments more granular than \$0.05 or \$0.10 depending on the underlying security.

Orders that are priced in increments finer than the minimum trading increment are rejected.

### 6.3 Time in Force Values

IOC – immediate-or-cancel

DAY – available for trading during pre-opening and regular trading hours

GTD – expires at the earlier of specified expire time or end of the after-hours trading session

GTX – expires at the end of the after-hours trading session

RHO – participates in the opening auction (BZX listed securities) or opening process (EDGA/EDGX/BYX/BZX), works as a day limit order during core market hours, and participates in the closing auction (BZX listed securities), any non-executed shares cancelled after the close

All remaining orders (including GTC Orders) expire at the end of regular trading hours.

### 6.4 Routing

Users have the option, but are not required, to use BATS's affiliated broker-dealer, BATS Trading, Inc., to route orders to markets other than BZX Exchange, BYX Exchange, EDGA Exchange, or EDGX Exchange. Neither Book Only nor BATS Post Only Orders are routed to other markets. Book Only orders are only executable on the applicable BATS market. BATS Post Only Orders add liquidity, and never remove liquidity from the order book unless it's in the economic best interest of the order to do so.

### 6.5 Locking or Crossing the Market

Orders that would lock or cross the consolidated market are re-priced or rejected depending upon the request of the User.

### 6.6 Throttles

No guarantee is made about system performance, especially during periods of high volatility and order traffic. BATS does maintain a message per second limit at which point new orders and modifies are rejected, but this limit is subject to change at any time so contact the BATS Trade Desk for current limitations.

## 7 Connectivity Choices

Users are responsible for choosing their telecommunications provider and arranging for connections to the primary data center in Secaucus, New Jersey and the secondary data center in Chicago, Illinois. Users are strongly encouraged to establish connectivity to both data centers to minimize service disruption in the event of an issue at either data center. BATS supports the following connectivity methods:

- Cross-Connect: Users that are co-located in either data center may request an in-house cross-connect from the User's Point of Presence (PoP) to BATS.
- Extranet Providers: BATS is currently on-network with various extranet providers. Refer to the [U.S. Equity/Options Connectivity Manual](#) for a current list of extranet providers.
- VPN: Users may connect via a Virtual Private Network (VPN) over the Internet, utilizing the IP Security Protocol (IPSec) for certification testing. Production network connections are NOT available via VPN.

BATS US Equities/Options  
User Manual (Version 3.0.3)

- Point-to-Point: Users may connect using a point-to-point connection using leased lines or other network methods (e.g MetroE, T-3).

For more detailed information and instructions on how to connect to the BATS, please refer to the [U.S. Equity/Options Connectivity Manual](#).

## 8 Trading Hours

### 8.1 BZX and BYX Equities Exchanges

| Session  | Start Time           | End Time |
|--|----------------------|----------|
| Begin Order Acceptance (Pre-Market Orders)<br>Pre-Market orders will be accepted but will not begin trading until 8:00 AM.           | 6:00 AM              | 8:00 AM  |
| Begin Order Acceptance (Regular Session Orders)<br>Regular Session orders will be accepted but will not begin trading until 9:30 AM. | 6:00 AM              | 9:30 AM  |
| Pre-Market Session   | 8:00 AM <sup>1</sup> | 9:30 AM  |
| Regular Trading Session  | 9:30 AM              | 4:00 PM  |
| Post Market Session  | 4:00 PM              | 5:00 PM  |

<sup>1</sup>Changing to 7:00AM ET effective 11/30/15 on EDGA and 12/1/15 on BYX pending SEC approval.

### 8.2 EDGX and EDGA Equities Exchanges

| Session  | Start Time           | End Time |
|--|----------------------|----------|
| Begin Order Acceptance (Pre-Market Orders)<br>Pre-Market orders will be accepted but will not begin trading until 8:00 AM.           | 6:00 AM              | 8:00 AM  |
| Begin Order Acceptance (Regular Session Orders)<br>Regular Session orders will be accepted but will not begin trading until 9:30 AM. | 6:00 AM              | 9:30 AM  |
| Pre-Market Session   | 8:00 AM <sup>2</sup> | 9:30 AM  |
| Regular Trading Session  | 9:30 AM              | 4:00 PM  |
| Post Market Session  | 4:00 PM              | 8:00 PM  |

<sup>2</sup>Changing to 7:00AM ET effective 12/2/15 on BZX and 12/3/15 on EDGX pending SEC approval.

### 8.3 BZX and EDGX Options Exchanges

| Session   | Start Time           | End Time |
|---|----------------------|----------|
| Begin Order Acceptance (Pre-Market Orders)<br>Pre-Market orders will be accepted but will not begin trading until market open after 9:30AM. | 8:00 AM <sup>3</sup> | 9:30 AM  |
| Regular Trading Session   | 9:30 AM              | 4:00 PM  |
| Extended Market Session (Select ETF's only)   | 4:00 PM              | 4:15 PM  |

<sup>3</sup>Changing to 7:30AM ET effective 12/11/15 pending SEC approval.

## 9 Holiday Schedule

BATS will be closed in observance of the following holidays:

- New Year's Day
- Martin Luther King, Jr. Day
- President's Day
- Good Friday
- Memorial Day
- Independence Day

- Labor Day
- Thanksgiving Day
- Christmas

The [BATS Holiday Schedule](#) is subject to change.

## 10 Clearly Erroneous Executions Policy

The Exchange's Clearly Erroneous Executions policy is set forth in BZX Rule 11.17, BYX Rule 11.17, EDGA Rule 11.15 and EDGX Rule 11.15. The Exchange's rules are available at:

- [BATS BZX Exchange Rule Book](#)
- [BATS BYX Exchange Rule Book](#)
- [BATS EDGA Exchange Rule Book](#)
- [BATS EDGX Exchange Rule Book](#)

## 11 Obvious Error Policy

The BATS Option Exchange's Obvious Error Policy is set forth in Options Rule 20.6. The Option Exchange's rules are available at:

- [BATS BZX Exchange Rule Book](#)
- BATS EDGX Exchange Rule Book [\(pending SEC approval\)](#)

## 12 Contact BATS

|                                |  |
|--------------------------------|--|
| <b>Global Markets Web Site</b> | <a href="http://www.bats.com/">http://www.bats.com/</a>  |
| <b>Equities Web Site</b>       | <a href="http://www.batstrading.com/">http://www.batstrading.com/</a>                          |
| <b>Options Web Site</b>        | <a href="http://www.batsoptions.com/">http://www.batsoptions.com/</a>                          |
| <b>Main Number</b>             | (913) 815-7000   |
| <b>Trade Desk</b>              | (913) 815-7001<br><a href="mailto:tradedesk@bats.com">tradedesk@bats.com</a>                   |
| <b>Membership Services</b>     | (913) 815-7002<br><a href="mailto:membershipservices@bats.com">membershipservices@bats.com</a> |
| <b>Billing</b>                 | (913) 815-7003<br><a href="mailto:billing@bats.com">billing@bats.com</a>                       |
| <b>Network Operations</b>      | (913) 815-7005<br><a href="mailto:noc@bats.com">noc@bats.com</a>                               |
| <b>Career Opportunities</b>    | <a href="mailto:jobs@bats.com">jobs@bats.com</a><br>Please send resume and a cover letter.     |
| <b>FAX</b>                     | (913) 815-7119   |



BATS US Equities/Options  
User Manual (Version 3.0.3)

**Mailing Address**

BATS Exchange, Inc.  
8050 Marshall Drive, Suite 120  
Lenexa, KS 66214

**Data Centers**

Refer to the [U.S. Equity/Options Connectivity Manual](#)

## Revision History

| Document Version | Date     | Description  |
|------------------|----------|--|
| 1.0.0            | 08/20/10 | Initial version 1.0.0 merging BATS Exchange (BZX) User Manual w/ BATS Y-Exchange (BYX) User Manual.  |
| 2.0.0            | 02/10/12 | Renamed to BATS US Equities/Options User Manual.<br>Included details on BATS Options.<br>Add updates related to BZX Exchange becoming a listings Exchange.<br>Updated outdated information   |
| 3.0.0            | 12/09/14 | Added EDGA/EDGX integration related references and updates.  |
| 3.0.1            | 05/05/15 | Updated name change for BATS Options Exchange to BZX Options Exchange.   |
| 3.0.2            | 07/27/15 | Included support for EDGX Options Exchange   |
| 3.0.3            | 11/12/15 | Updated Pre-Market session trading start time to 7:00 AM <b>effective 11/30/15 (EDGA), 12/1/15 (BYX), 12/2/15 (BZX), and 12/3/15 (EDGX)</b> pending SEC approval.<br>Updated Pre-Market Queueing session start time on EDGX Options and BZX Options to 7:30 AM <b>effective 12/11/15</b> pending SEC approval. |