



US Equities User Manual

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1 Introduction

This document provides background information regarding BATS Exchange (“BZX”), BATS Y-Exchange (“BYX”) and BATS Trading, Inc. (together with BZX and BYX, 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.batstrading.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 commenced operations as a national securities exchange. On August 13, 2010, BYX’s registration as a national securities exchange was approved by the Securities and Exchange Commission. BYX plans to commence operations as a national securities exchange on October 15, 2010.

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 are rapidly working 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.batstrading.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 Order Handler** using the industry standard FIX protocol, with BATS Exchange specific extensions. The FIX 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, Multicast PITCH or TCP FAST PITCH (compressed) protocols. Top of book market data is also available through the BATS TCP TOP protocol. BATS does not charge Members or other data recipients to use its core real-time market data. However, BZX does offer a fee-based last sale product that contains only trade information (not quotation information). In addition the BZX last sale product, BZX offers certain fee-based historical data products through the BATS Web Portal.

Users or their clearing firms may request copies of their executions via the BATS DROP protocol. This protocol works either in real-time or in a batch mode.

5 Technology

The Exchange's trading platform is housed in a world-class data center in Weehawken, New Jersey maintained by SAVVIS, Inc. This facility is used to host multiple additional market centers.

The SAVVIS data center provides a high level of security and availability through redundant and reliable environment control systems (redundant power supplies, on-site backup generators, cooling systems, etc). Datacenter 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.

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Users may submit orders to the Exchange designated as IOC, Day, Good 'til Cancel, Good 'til Day, Good 'til Extended Day, Reserve, Odd Lot, Mixed Lot, BATS Only, BATS Post Only, Partial Post Only at Limit, Pegged, Mid-Point Peg, Discretionary, Non-Displayed, Destination Specific, Modified Destination Specific, and/or Intermarket Sweep. Note that BATS Only and Post Only order types will only execute/post on the BATS platform that is targeted by the User.

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

- [BATS Exchange \(BZX\) Rule Book](#)
- [BATS Y-Exchange \(BYX\) Rule Book](#)

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

- [BATS Exchange \(BZX\) FIX Specification](#)
- [BATS Y-Exchange \(BYX\) FIX Specification](#)

6.2 Minimum Trading Increment

Most stocks trade in increments of \$0.01. However, some stocks are eligible for trading in sub-penny increments of \$0.0001. 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

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 or BYX. Neither BATS Only nor BATS Post Only Orders are routed to other markets. BATS Only orders are only executable on the applicable BATS market (BZX or BYX). BATS Post Only Orders add liquidity, and never remove liquidity from the order book.

6.5 Crossing the Market

Orders that would cross the consolidated market are slid or rejected depending upon the request of the User.

6.6 Price Sliding

Regulation NMS requires exchanges and other market centers to have rules reasonably designed "to avoid a pattern or practice of displaying a quote which would lock or cross the consolidated quote."

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BATS **price sliding** allows Users to enter orders on the BATS book which would lock or cross the NBBO, as long as the order would not lock the other orders on the limit order book (displayed or non-displayed).

Without price sliding, algorithmic traders would likely need to retry orders multiple times in rapid succession in order to attempt to get on the book when the consolidated NBBO moves, putting needless load on the system. BATS price sliding (“Displayed Price Sliding”) allows the more aggressive orders to reside in the matching engine, even when their display price must be constrained by the NBBO.

Displayed Price Sliding is most likely to occur with non-routable and BATS Post Only Orders. By default, orders route to away market centers when the away market center displays a better quote in the consolidated NBBO than is available on the order book.

Users may disable Displayed Price Sliding by setting FIX tag 9479=R (“DisplayIndicator”) on their orders, or changing their default port setting by calling the BATS Trade Desk.

Displayed Price Sliding will permanently re-price orders that cross the NBBO on entry to work at the locking price.

The display price of the order is temporarily “slid” to a less aggressive level in order to avoid putting out a quote which would lock the consolidated NBBO.

Regular incoming orders receive “price improvement” relative to the NBBO when they match against the “slid” order at a price more aggressive than its display price.

When the consolidated NBBO widens, the display price is automatically “unslid” to re-display the order at the previous locking price. The new “unslid” price is reflected both in our PITCH feed and in our quote in the consolidated NBBO.

Displayed Price Sliding is the default setting for BATS FIX ports.

Upon request from a User, the permanent working price and initial display price can be reflected back in the FIX acknowledgement sent to Users in FIX tags 9690 (“Working Price”) and 9691 (“Display Price”).

Example of Displayed Price Sliding:

NBBO:

10.00X10.01

BATS:

10.00X10.02

1. Buy BATS-Only Order at 10.03
2. Order is re-priced and ranked 10.01 and displayed down to 10.00 (10.01 would lock the NBBO)
3. NBBO goes to 10.00X10.02
4. Order is re-displayed at 10.01 using its existing priority
5. NBBO goes to 10.01X10.03

6. Order remains unchanged (it's only allowed to unslide once after entry)

Note: Order will always execute at 10.01 regardless of its display price at the time

6.7 Pegged Orders

BATS allows orders to peg to the NBBO in four ways:

1. Primary - pegs to the same side of the NBBO as the order
2. Market - pegs to the opposite side of the NBBO from the order
3. Mid-Point - pegs to the midpoint of the NBBO
4. Alternate Mid-Point - pegs to the less aggressive of the midpoint of the NBBO or 1 tick inside the same side of the NBBO as the order

All pegged orders are non-displayed. Primary and Market pegs may include a non-aggressive offset. Mid-Point pegs may not include an offset, and may result in executions at half-penny increments. Peg prices will be temporarily clipped as necessary to avoid crossing the market or resting at a price that would create a short sale test reject. All pegged orders are ranked at a lower priority than non-pegged orders. Pegging may be used in conjunction with reserve and discretion. Pegged orders are not routable and therefore must be BATS Only or BATS Post Only. Midpoint-Peg Orders have a lower priority than other pegged orders ranked at the same price.

6.8 Throttles

No guarantee is made about system performance, especially during periods of high volatility and order traffic. However, the BATS system was designed to handle at least 500 orders per second, per port, while providing acceptable order acknowledgement times. Users planning to send orders at a higher rate than 500 orders per second should make arrangements to connect to multiple ports and ensure they have an appropriate amount of bandwidth that will be required for their order flow.

7 Connectivity Choices

Users are responsible for choosing their telecommunications provider and arranging for connections to the primary data center in Weehawken, New Jersey and the secondary data center in Nutley, New Jersey. 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). VPN connectivity is also available for certification testing. PITCH, FAST PITCH, and TOP market data are NOT available via VPN. DROP executions are also NOT available via VPN.
- 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](#).

For information regarding Bandwidth Requirements for BATS, please refer to Chapter 3 of the [U.S. Equity/Options Connectivity Manual](#).

8 Trading Hours

Pre-Opening Session	8:00 am to 9:30 am Eastern Time
Core Trading Session	9:30 am to 4:00 pm Eastern Time
After Hours Trading Session	4:00 pm to 5:00 pm Eastern Time

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 and BYX Rule 11.17. The Exchange's rules are available at:

- [BATS Exchange \(BZX\) Rule Book](#)
- [BATS Y-Exchange \(BYX\) Rule Book](#)

11 Contact BATS

Web Site	http://www.batstrading.com/
Main Number	(913) 815-7000
Trade Desk	(913) 815-7001 tradedesk@batstrading.com
Membership Services	(913) 815-7002 membershipservices@batstrading.com
Billing	(913) 815-7003 billing@batstrading.com
Network Operations	(913) 815-7005 noc@batstrading.com
Career Opportunities	jobs@batstrading.com Please send resume and a cover letter.
FAX	(913) 815-7119
Mailing Address	BATS Exchange, Inc. 8050 Marshall Drive, Suite 120 Lenexa, KS 66214
BYX Data Center	SAVVIS, Inc. Weehawken, NJ Dan Diversey Sr. Sales Executive - Financial Markets (312) 214-7912 Dan.Diversey@savvis.net

Revision History

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1.0.0	08/20/10	Initial version 1.0.0 merging BATS Exchange (BZX) User Manual w/ BATS Y-Exchange (BYX) User Manual.