



US Equities Market Maker Quoter Specification

Version 1.0.4

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Contents

1	Introduction	3
1.1	Overview	3
1.2	Operation	3
1.2.1	Reference Price	3
1.2.2	Automated Quote Updates	3
2	BATS Market Maker Registration Tool.....	7
2.1	BATSTRADING.COM Web Portal	7
2.2	Registered Securities Upload	8
2.3	File Format.....	8
3	DROP Port Requirement.....	10
3.1	Max Number of Hits	10
4	Contact Details	11

1 Introduction

1.1 Overview

BATS' Market Maker Quoter was designed to optionally assist BATS Registered Market Makers in fulfilling their quote obligations by automatically maintaining an active quote within a defined price range for all symbols in which they are registered as a Market Maker on BATS.

1.2 Operation

As noted above, use of the Market Maker Quoter by a Registered Market Maker is optional. During normal market hours (i.e. 9:30AM – 4:00PM ET), if a Registered Market Maker elects to use this option, the Market Maker Quoter will automatically maintain an active quote on behalf of the Registered Market Maker for all registered securities. The Market Maker Quoter will maintain an active quote in these securities at the minimum quote size of one round lot at a specific distance from a defined Reference Price.

As BATS has no means of tracking a firm's actual net position, any executions that occur against the Ask side of quotes generated by the Market Maker Quoter will be marked as short sales.

1.2.1 Reference Price

The Reference Price for each side of the automatic quote will be the NBB or NBO; if there is no NBB or NBO, the Last Sale is used as the Reference Price for that side. Note that in the absence of an NBB or NBO at the commencement of regular trading hours, the Market Maker Quoter will wait to enter a quotation on that side until an execution occurs on the primary listing exchange.

The quote will be entered by the Market Maker Quoter at a specified distance (the "Designated Percentage") away from the Reference Price as follows:

1. For Single-Stock-Circuit-Breaker (SSCB) securities, the distance from the Reference Price is defined as 8% during the 9:45AM – 3:35PM ET trading period.
2. For SSCB securities, the distance from the Reference Price is defined as 20% from 9:30AM – 9:45AM ET and from 3:35PM – 4:00PM ET.
3. For all other securities, the distance from the Reference Price is defined as 28% from 9:30AM – 4:00PM ET.

1.2.2 Automated Quote Updates

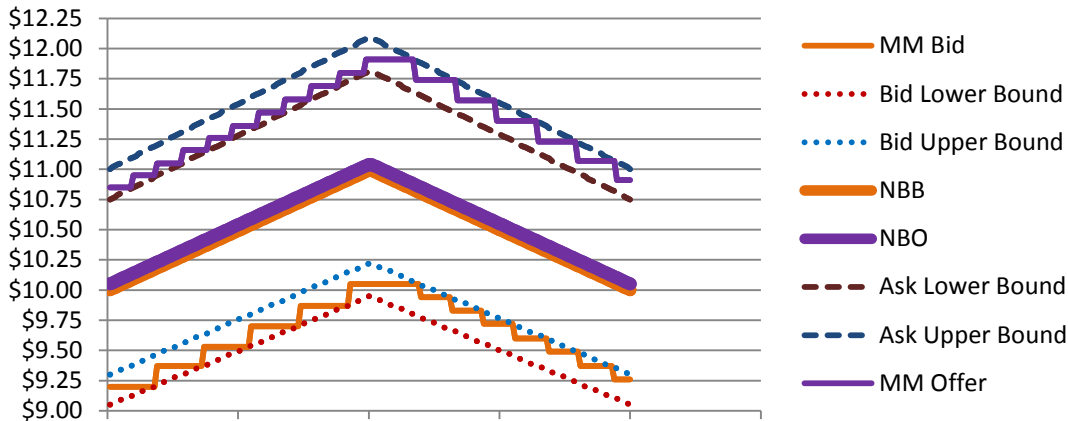
Once the Market Maker Quoter has published a quote for a given security, the quote will not be refreshed until it falls outside of a band around its entered price. The band is presently defined to be 1% on the inside and 1.5% on the outside (these percentages are relative to the Reference Price):

BATS US Equities
Market Maker Quoter Specification (Version 1.0.4)

- A Market Maker Quoter Bid in a SSCB security will be automatically updated between 9:30AM – 9:45AM ET or 3:35PM – 4:00PM ET if it falls outside of the range (NBB x .785) to (NBB x .81).
- A Market Maker Quoter Bid in a SSCB security will be automatically updated between 9:45AM – 3:35PM ET if it falls outside of the range (NBB x .905) to (NBB x .93).
- A Market Maker Quoter Bid in a non-SSCB security will be automatically updated between 9:30AM – 4:00PM ET if it falls outside of the range (NBB x .705) to (NBB x .73).
- A Market Maker Quoter Offer in a SSCB security will be automatically updated between 9:30AM – 9:45AM ET or 3:35PM – 4:00PM ET if it falls outside of the range (NBO x 1.19) to (NBO x 1.215).
- A Market Maker Quoter Offer in a SSCB security will be automatically updated between 9:45AM – 3:35PM ET if it falls outside of the range (NBO x 1.07) to (NBO x 1.095).
- A Market Maker Quoter Offer in a non-SSCB security will be automatically updated between 9:30AM – 4:00PM ET if it falls outside of the range (NBO x 1.27) to (NBO x 1.295).

The following diagram and detailed example illustrate how price bands are used to determine when a quote refresh will occur. An NBBO update that causes an existing Market Maker Bid or Ask quote to fall outside of the price band results in a quote refresh as demonstrated in the diagram that follows.

MM Quotes Sample for a Circuit Breaker Stock During Core CB Hours



Example: Consider an **NBBO at \$10.00 X \$10.01** in a Single Stock Circuit Breaker security (the “Security”).

1. At **9:30AM ET**, the BATS Market Maker Quoter will enter a **buy for one round lot at \$8.00** (10.00 x .8) (the “Market Maker Bid”) and a **sell for one round lot at \$12.01** (10.01 x 1.2) (the “Market Maker Offer”) for each BATS Market Maker in the Security that elects to use the BATS Market Maker Quoter. The price of the

BATS US Equities
Market Maker Quoter Specification (Version 1.0.4)

orders will be calculated using a Designated Percentage of 20%, as set forth above.

2. Assume that the **NBBO for the Security moves to \$10.09 X \$10.10**. The current Market Maker Bid of \$8.00 will not be re-priced because it will remain between the price bounds of the NBB (Lower Bound: $\$10.09 \times .785 = \7.921 ; Upper Bound: $\$10.09 \times .81 = \8.173). The current Market Maker Offer of \$12.01 will fall outside of the range of the price bounds of the NBO (Lower Bound: $10.10 \times 1.19 = \$12.019$; Upper Bound: $10.10 \times 1.215 = \$12.272$), so the **Market Maker Offer will be re-priced to \$12.12** (10.10×1.2).
3. Assume that the **NBBO moves back to \$10.00 X \$10.01**. The Market Maker Bid (\$8.00) will remain within the price bounds of the new NBB (Lower Bound: $10.00 \times .785 = \$7.85$; Upper Bound: $10.00 \times .81 = \$8.10$) and, thus, the **Market Maker Bid will not change**. Similarly, the current Market Maker Offer of \$12.12 will still fall within the price bounds of the NBO (Lower Bound: $10.01 \times 1.19 = \$11.912$; Upper Bound: $10.01 \times 1.215 = \$12.162$) and, thus, the **Market Maker Offer will not change**.
4. At **9:45AM ET the Designated Percentage moves to 8%** and the BATS Market Maker Quoter will **automatically re-price** the Market Maker Bid to **\$9.20** ($10.00 \times .92$) and the Market Maker Offer to **\$10.81** (10.01×1.08).
5. Assume that the **NBBO for the Security moves to \$9.89 X \$9.90**. The existing Market Maker Bid of \$9.20 will now fall outside the price bounds of the NBB (Lower Bound: $9.89 \times .905 = \$8.95$; Upper Bound: $9.89 \times .93 = \$9.198$), so the **Market Maker Bid will be re-priced to \$9.10** ($9.89 \times .92$). As the current Market Maker Offer of \$10.81 will remain within the bounds of the NBO (Lower Bound: $9.90 \times 1.07 = \$10.593$; Upper Bound: $9.90 \times 1.095 = \$10.841$), the **Market Maker Offer will not change**.
6. Assume that the **NBBO now drops to \$9.86 X \$9.87**. The Market Maker Bid of \$9.10 will remain within the price bounds of the new NBB (Lower Bound: $9.86 \times .905 = \$8.923$; Upper Bound: $9.86 \times .93 = \$9.17$) and, thus, the **Market Maker Bid will not change**. The Market Maker Offer of \$10.81, however, will now fall outside the price bounds associated with the new NBO (Lower Bound: $9.87 \times 1.07 = \$10.561$; Upper Bound: $9.87 \times 1.095 = \$10.808$) and the **Market Maker Offer will be re-priced to \$10.65** (9.87×1.08).
7. As the NBBO moves, the Designated Percentage of 8% will continue to be used to determine the lower and upper bounds until 3:35PM ET.
8. Assume the NBBO is \$10.00 X \$10.01 at **3:35PM ET at which time the Designated Percentage of 20% goes back into effect**. At this point, the BATS Market Maker Quoter will **automatically re-price** the Market Maker Bid to **\$8.00** ($10.00 \times .8$) and the Market Maker Offer to **\$12.01** (10.01×1.2).
9. At 4:00pm ET, **all BATS Market Maker Quotes are cancelled**.

For securities that are not part of the Single Stock Circuit Breaker, the same price band logic will apply and the distance used for setting quotes will be fixed at 28% from 9:30AM

BATS US Equities
Market Maker Quoter Specification (Version 1.0.4)

to 4PM ET. Also note that all quote calculations will be rounded to the most aggressive displayable tick size.

2 BATS Market Maker Registration Tool

BATS offers Registered Market Makers the ability to register symbols in which they wish to automatically make a market through the Market Maker Quoter process via its Member Web Portal. The Web Portal is accessed through the public website at <http://www.batstrading.com/> and registration files must be uploaded prior to 9AM ET on the business day of the trading date they will be actively quoted by the BATS Market Maker Quoter.

2.1 BATSTRADING.COM Web Portal

Members of BATS can request a login to the BATS Member Web Portal from the BATS Trade Desk. After logging into their Web Portal account, users with appropriate access will be able to select the **Market Maker** link under Equities Tools in the lower left menu of their account page.



The screen that follows allows Market Makers to view the current list of symbols they have registered to be automatically quoted by the BATS Market Maker Quoter for the current and next trading session. Through this interface, Market Makers may also upload the list of symbols they wish to have the BATS Market Maker Quoter manage on the next trading session. Example syntax required for file uploaded is shown at the bottom of the active screen.

BATS US Equities
Market Maker Quoter Specification (Version 1.0.4)

Market Maker Symbols for BATS

Select Clearing Firm

Current Trading Session's Symbol List

Next Trading Session's Symbol List

File Upload Content Sample

```
symbol,ADDED
symbol,ADDED
symbol,REMOVED
symbol,ADDED,1
symbol,ADDED,5
```

* Note... If the third param for quoted symbol is not specified, and no Max Quote is provided in the Upload File form, an infinite value will be assumed and quotes will continue to be generated indefinitely throughout the trading session.

2.2 Registered Securities Upload

When a Market Maker uploads their file of symbols for which they wish BATS to automatically maintain quote obligations via the Market Maker Quoter, they may specify a **Max Quote** parameter for each security. If the parameter is not provided, no Max Quote value will be entered, and the automated quote will refresh indefinitely after being hit.

In any instance where a Market Maker's automated quote receives a fill (even a partial fill), that fill is counted as a hit. Once the number of hits equals the specified **Max Quote**, BATS will pull both sides of the quote so that the Market Maker may determine the next steps to fulfill their quoting obligations on their own initiative and manage their risk appropriately.

Once a symbol has been "ADDED", it will automatically be quoted daily by the Market Maker Quoter until a registration file is uploaded noting the symbol is to be "REMOVED". All uploaded files will be processed and changes will be effective next day.

2.3 File Format

Each line of the registered securities upload file represents a rule containing a comma separated list of fields. The fields are defined as follows:

`symbol, action, max_quotes`

- `symbol` – The symbol, such as 'MSFT'.
- `action` – The action is one of the following two values:
 1. `ADDED` - Add symbol to list of symbols for which you will be a market maker.
 2. `REMOVED` - Remove symbol from list of symbols for which you will be a market maker.

BATS US Equities
Market Maker Quoter Specification (Version 1.0.4)

- `max_quotes` – The maximum number of hits that will occur before BATS will pull both sides of their automated quote.

3 DROP Port Requirement

All BATS Registered Market Makers are **required** to maintain a Drop port such that they may receive information relating to the quote and execution activity of their Market Maker Quoter events. Through Order by Order FIX Drop, Market Makers can actively monitor the Market Maker Quoter automated quotes as well as any executions that may occur. A standard BATS FIX Drop or legacy DROP port may be utilized, but will not allow for monitoring of quote specific events.

3.1 Max Number of Hits

For the purposes of actively monitoring the number of hits a firm has remaining before BATS will pull both sides of their automated quote, BATS has repurposed FIX Tag 1 on FIX Drop ports to maintain a count of hits remaining for a given security upon an execution. In event of an execution, FIX Tag 1 should be monitored for a value of "0" as the Market Maker will need to take appropriate action in order to continue to fulfill their quote obligations. This may involve contacting the BATS Trade Desk to re-establish their automated quote or the Market Maker may choose to start fulfilling their quote obligation on their own.

In the case where the **Max Quote** parameter has not been defined for a registered security, a value of "UNLIMITED" will be displayed in FIX Tag 1.

For more information regarding Order by Order FIX Drop, refer to chapter 6 FIX Drop of the appropriate BATS US Equities FIX Specification:

- [BYX Exchange US Equities FIX Specification](#)
- [BZX Exchange US Equities FIX Specification](#)

4 Contact Details

If you have any questions or would like to begin using BATS Market Maker Quoter, please contact your account manager or any of the teams below:

Sales

sales@batstrading.com

Phone: 212.378.8530

Trade Desk

tradedesk@batstrading.com

Phone: 913.815.7001

BATS US Equities
Market Maker Quoter Specification (Version 1.0.4)

Revision History

Document Version	Date	Description
1.0.0	10/08/10	Initial Version 1.0.0.
1.0.1	11/09/10	Defined effective date of amended Rule 11.8. Corrected time reference of 3:40 to 3:35.
1.0.2	11/17/10	Removed requirement of Order by Order FIX DROP. Standard FIX DROP acceptable for Members only interested in execution information.
1.0.3	12/09/10	Further relaxed Drop requirement to allow for use of legacy DROP for firms only interested in Market Maker Quoter execution event information.
1.0.4	10/08/12	Correction to reference of the Designated Percentage distance from Reference Price for non-SSCB securities to be 28% vs. 30%.