OUCH 5.0
Order Entry Specification

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1. Overview

NASDAQ accepts limit orders from system participants and executes matching orders when possible. Non-matching orders may be added to the NASDAQ Limit Order Book, a database of available limit orders, where they wait to be matched in price-time priority.

OUCH is a simple protocol that allows NASDAQ participants to enter, replace, and cancel orders and receive executions. It is intended to allow participants and their software developers to integrate NASDAQ into their proprietary trading systems or to build custom front ends.

OUCH only provides a method for participants to send orders to NASDAQ and receive updates on those orders entered. For information about all orders entered into and executed on the NASDAQ book, refer to the ITCH protocol (available separately).

OUCH is the low-level native protocol for connecting to NASDAQ. It is designed to offer the maximum possible performance at the cost of flexibility and ease of use. For applications that do not require this extreme level of performance, NASDAQ offers other, more standard interfaces that may be more suitable and easier to develop to.

1.1. Architecture

The OUCH protocol is composed of logical messages passed between the OUCH host and the client application. Each message type has a fixed message length.

All messages sent from the OUCH host to the client are assumed to be sequenced, and their delivery must be guaranteed by some lower level protocol. The SoupBinTCP (available separately) are the typical lower level protocols used to guarantee the delivery and sequencing of OUCH messages sent from the host to the client.

Messages sent from the OUCH client to the host are inherently non-guaranteed, even if they are carried by a lower level protocol that guarantees delivery (like TCP/IP sockets). Therefore, all host-bound messages are designed so that they can be benignly resent for robust recovery from connection and application failures. Each physical OUCH host port is bound to a NASDAQ-assigned logical OUCH Account. On a given day, every order entered on OUCH is uniquely identified by the combination of the logical OUCH Account and the participant-created UserRefNum field.

1.2. Data Types

Alpha fields may contain upper and lowercase characters.

All fixed-width alpha fields are left-justified and padded on the right with spaces.

All Numeric fields are binary formatted, big-endian numbers. Four flavors of numeric fields are supported: Longs (8 bytes), Integers (4 bytes), Shorts (2 bytes), and Bytes (1 byte).

Sizes (shares quantities, field lengths) should be treated as unsigned values.

Prices are numeric fields with an implied 4 decimal places. Prices are to be treated as unsigned numeric fields, unless designated otherwise. The maximum price currently supported is $199,999.9900 (decimal, 7735939C hex). To flag an order as a market order for a cross, use the special price of $214,748.3647 (decimal, 7FFFFFFF hex). Orders entered with a price of $200,000.00 or the max integer value will also be treated as market orders.

A UserRefNum is an unsigned numeric. For a given OUCH port, the UserRefNum is used as a transaction identifier, and must be both unique and strictly increasing throughout the trading day. The system ignores new order requests identified with UserRefNums lower than the last one processed, assuming they are retransmissions.

ClOrdID is alphanumeric. All letters and numbers are allowed, as well as spaces.

An optional attribute on an order is communicated via a TagValue element, constructed as follows:

TagValue element

Field	Offset	Length	Type	Notes
Length	0	1	Numeric	Remaining length of the TagValue element
OptionTag	1	1	Numeric	Identifies the option (see Appendix B)
OptionValue	2	variable	variable	Value of the option

The set of optional attributes are set on an order via an options appendage. Each of the individual options formatted as a TagValue element, and the options appendage is then constructed by concatenating together the selected set of options. See Appendix B for more details.

1.3. Fault Redundancy

A single OUCH Account can be bound to multiple physical OUCH machines. These OUCH machines then act as mirrors of each other for fault redundancy. In this configuration, both machines are able to accept orders and cancel requests, and any outbound messages would be simultaneously generated by both physical OUCH hosts.

2. Inbound Messages

Inbound messages are sent from the participant's application to the OUCH host. They are not sequenced. All Inbound Messages may be repeated benignly. This gives the client the ability to re-send any Inbound message if it is uncertain whether NASDAQ received it in the case of a connection loss or an application error.

The idea of benign inbound message retransmission with end-to-end acknowledgement is fundamental to NASDAQ's fail-over redundancy. If your connection ever fails, there is no way for you to know if pending messages actually made it over the link before the failure. A robust OUCH client can safely re- send any pending messages over a mirrored link without worrying about generating duplicates. This applies to NASDAQ's disaster fail over capability as well; if NASDAQ ever needs to fail over to the backup site, some messages sent at the moment of the failure may be lost. A robust application can simply re- send the pending messages, making the fail over seamless to the end user.

All inbound messages on an OUCH port are processed sequentially. This guarantees that if two orders are entered consecutively on the same connection, the first order entered will always be accepted first.

2.1. Type O – Enter Order

Enter Order

Name	Offset	Len	Value	Notes
Type	0	1	'O'	Identifies this message as Enter Order Message type
UserRefNum	1	4	UserRefNum	As described above in Data Types. UserRefNum must be day-unique and strictly increasing for each OUCH account.
Side	5	1	Alpha	B= buy S = sell T = sell short E = sell short exempt
Quantity	6	4	Integer	Total number of shares. Must be greater than zero and less than 1,000,000.
Symbol	10	8	Alpha	Stock Symbol
Price	18	8	Price	The price of the order. Please refer to the Data Types section for more clarification.

Enter Order

Name	Offset	Len	Value	Notes
Time In Force	26	1	Alpha	Corresponds to TimeInForce (59) in Nasdaq FIX 0 = Day (Market Hours) 3 = IOC 5 = GTX (Extended Hours) 6 = GTT (ExpireTime needs to be specified) E = After hours
Display	27	1	Alpha	Y = visible N = hidden A = attributable
Capacity	28	1	Alpha	A = agency P = principal R = riskless O = other
InterMarket Sweep Eligibility	29	1	Alpha	Y = eligible N = not eligible
CrossType	30	1	Alpha	N = continuous market O = opening cross (Nasdaq only) C = closing cross (Nasdaq only) H = halt/IPO (Nasdaq only) S = supplemental (Nasdaq only) R = retail (BX only) E = extended life (Nasdaq only) A = after hours close (Nasdaq only)
ClOrdID	31	14	Alpha	Customer order identifier. ClOrdID will not be checked for day-uniqueness for each OUCH account.
Appendage Length	45	2	Integer	The length of the remaining Optional Appendage field.
Optional Appendage	47	var	TagValue	The available options supported on this message are: Firm MinQty CustomerType MaxFloor PriceType PegOffset Discretion DiscretionPrice DiscretionPriceType DiscretionPegOffset PostOnly RandomReserves Route ExpireTime TradeNow HandleInst GroupID SharesLocated See Appendix B for more detail

2.2. Type U – Replace Order Request

The Replace Order Message allows you to alter most of the attributes of an order in a single message. This is more efficient than canceling an existing order and immediately succeeding it with a new order. Replacing an order always gives it a new timestamp for its time priority on the book. If you wish you simply partially cancel an order and retain its time priority, send a Cancel Order Message instead.

There are two Order UserRefNums in the Replace Order Message. The first must be filled out with the Order UserRefNum of the existing order; the second must be a new Order UserRefNum for the replacement. The replacement Order UserRefNum must be unique in the same way as Order UserRefNums are in the Enter Order Message, and replacement Order UserRefNums may not be the same as the UserRefNum sent in Enter Order Messages. Any replacement Order UserRefNum that has already been used in another Enter Order Message or Replace Order Message will be ignored.

NASDAQ may respond to the Replace Order Message in several ways:

1. If the order for the existing Order UserRefNum is no longer live or if the replacement Order UserRefNum was already used, the replacement will be silently ignored. The replacement Order UserRefNum will not be consumed and may be reused in this case.
2. If the order for the existing Order UserRefNum is live but the details of the replace are invalid (e.g.: new Shares >= 1,000,000), a Cancel Order Message will take the existing order out of the book. The replacement Order UserRefNum will not be consumed, and may be reused in this case.
3. If the order for the existing Order UserRefNum is live but the existing order cannot be canceled (e.g. the existing Order is a cross order in the late period), there will be an Order Reject Message. This reject message denotes that no change has occurred to the existing order; the existing order remains fully intact with its original instructions. The Order Reject Message consumes the replacement Order UserRefNum, so the replacement Order UserRefNum may not be reused.
4. If the order for the existing Order UserRefNum is live and can be replaced, you will receive either a Replaced Message or an Atomically Replaced and Canceled Message.

Replace Order Messages may be chained together, so that a single order is replaced over and over again. There is no limit to the number of replaces; however no single order/replace chain may execute more than 999,999 shares cumulatively.

The Shares on the replace denote the total number of shares liable for the whole chain. Here is an example:

Enter Order Message for 500 shares

Accepted Message for 500 shares

Executed Message for 100 shares

At this point, you decide to replace the order. If you want to be exposed for

a. the remaining 400 shares, send the Replace Order Message with 500 Shares. This 500 equals the 400 exposed plus the 100 previously executed.
b. a new 500 shares, send the Replace Order Message with 600 Shares. This 600 equals the 500 new shares plus the 100 previously executed.

This may seem a bit confusing at first, but it inhibits the risk of double-liability throughout the order/replace chain.

Replace Order Request

Name	Offset	Len	Value	Notes
Type	0	1	'U'	Identifies this message as Replace
Order Message type				
OrigUserRefNum	1	4	UserRefNum	This must be filled out with the Order UserRefNum sent on the Enter Order Message or last Replace Order Message.

Replace Order Request

Name	Offset	Len	Value	Notes
UserRefNum	5	4	UserRefNum	As described above in Data Types. The replacement Order UserRefNum must be unique and strictly increasing for each OUCH account.
Quantity	9	4	Integer	Total number of shares liable, inclusive of previous executions and Self Match Prevention decremented shares on this order chain. Must be greater than zero and less than 1,000,000.
Price	13	8	Price	The price of the replacement order. Please refer to the section in Data Types for more clarification.
Time In Force	21	1	Alpha	Corresponds to *TimeInForce* (59) in Nasdaq FIX 0 = Day (Market Hours) 3 = IOC 5 = GTX (Extended Hours) 6 = GTT (ExpireTime needs to be specified)
Display	22	1	Alpha	Y = visible N = hidden A = attributable
InterMarket Sweep Eligibility	23	1	Alpha	Y = eligible N = not eligible
ClOrdID	24	14	Alpha	Customer order identifier for replacement order
Appendage Length	38	2	Integer	The length of the remaining Optional Appendage field.
Optional Appendage	40	var	Options	The available options supported on this message are: MinQty MaxFloor PriceType PostOnly ExpireTime TradeNow HandleInst RandomReserves PegOffset DiscretionPrice DiscretionPriceType DiscretionOffset CustomerType GroupID SharesLocated See Appendix B for more detail

2.3. Type X – Cancel Order Request

The Cancel Order Message is used to request that an order be canceled or reduced. In the Cancel Order Message, you must specify the new "intended order size" for the order. The "intended order size" is the maximum number of shares that can be executed in total after the cancel is applied.

Cancel Order Request

Name	Offset	Len	Value	Notes
Type	0	1	'X'	Cancel Order Message
UserRefNum	1	4	UserRefNum	The Order UserRefNum as was originally transmitted in an Enter Order Message

Cancel Order Request

Name	Offset	Len	Value	Notes
Quantity	5	4	Integer	This is the new intended order size. This limits the maximum number of shares that can potentially be executed in total after the cancel is applied. Entering a zero here will cancel any remaining open shares on this order.

To cancel the entire balance of an order, you would enter a Cancel Order Message with a Shares field of zero.

Note that the only acknowledgement to a Cancel Order Message is the resulting Canceled Order Message. There is no "too late to cancel" message since by the time you received it, you would already have gotten the execution. Superfluous Cancel Order Messages are silently ignored.

2.4. Type M – Modify Order Request

The Modify Order Message is used to request modifications that will not affect order priority on the book. Since priority of the order does not change (exception noted), allowed modifications are restricted to only the ones specified in the message details below. Increasing share amount is not allowed and requests to do so will be ignored.

Modify Order Request

Name	Offset	Len	Value	Notes
Type	0	1	'M'	Modify Order Message
UserRefNum	1	4	UserRefNum	The Order UserRefNum as was originally transmitted in an Enter Order Message
Side	5	1	Alpha	The new side to be associated with the order. B= buy S = sell T = sell short E = sell short exempt Only the following modifications are allowed: S ↔ E S ↔ T E ↔ T
Quantity	6	4	Integer	This is the new intended order size. This limits the maximum number of shares that can potentially be executed in total after the cancel is applied. Entering a zero here will cancel any remaining open shares on this order.

2.5. Type Q – Account Query Request

The Account Query Request message can be used when recovering state to request the next available UserRefNum that can be used for identifying new transactions.

Account Query Request

Name	Offset	Len	Value	Notes
Type	0	1	'Q'	Account Query Request Message

3. Outbound Messages

Outbound messages are generated by the OUCH host port and received by your client application.

3.1. Type S – System Event

System Event Messages signal events that affect the entire NASDAQ system:

System Event Message

Name	Offset	Len	Value	Notes
Type	0	1	'S'	System Event Message
Timestamp	1	8	Timestamp	Expressed as nanoseconds since midnight
Event Code	9	1	Alpha	**S =Start Of Day,** indicating that exchange is open and is ready to accept orders. **E = End Of Day,** indicating that the exchange is closed and will no longer accept new orders. Note that it is still possible to receive breaks and cancels after this event.

3.2. Type A – Order Accepted

This message acknowledges the receipt and acceptance of a valid Enter Order Message. The data fields from the Enter Order Message are echoed back in this message. Note that the accepted values may differ from the entered values for some fields.

Accepted Messages normally come before any Executed Messages or Canceled Messages for an order. However, when the Order State field of an Accepted Message is Order Dead ("D"), no additional messages will be received for that order, as Order Dead means that the order was accepted and automatically canceled.

Order Accepted

Name	Offset	Len	Value	Notes
Type	0	1	'A'	Accepted Message Identifier
Timestamp	1	8	Timestamp	Expressed as nanoseconds since midnight
UesrRefNum	9	4	UserRefNum	The order UserRefNum as entered
Side	13	1	Alpha	The side as entered
Quantity	14	4	Integer	Total number of shares accepted
Symbol	18	8	Alpha	Stock symbol as entered
Price	26	8	Price	The accepted price of the order. Please note that the accepted price could potentially be different than the entered price if the order was re-priced by the exchange on entry. The accepted price will always be better than or equal to the entered price.
Time In Force	34	1	Alpha	The accepted Time in Force of the order. Please note that the accepted Time in Force may potentially be different than the entered Time in Force. The accepted Time in Force will always be equal to or shorter in scope than the entered Time in Force
Display	35	1	Alpha	The accepted display on the order Y = visible N = hidden A = attributable Z = conformant
Order Reference Number	36	8	Numeric	The day-unique Order Reference Number assigned by NASDAQ to this order

Order Accepted

Name	Offset	Len	Value	Notes
Capacity	44	1	Alpha	The capacity specified on the order
InterMarket Sweep Eligibility	45	1	Alpha	Y = eligible N = not eligible
CrossType	46	1	Alpha	The cross type as entered
Order State	47	1	Alpha	L = Order Live D = Order Dead
ClOrdID	48	14	Alpha	Customer order identifier
Appendage Length	62	2	Integer	The length of the remaining Optional Appendage field.
Optional Appendage	64	var	TagValue	The available options supported on this message are: Firm MinQty CustomerType MaxFloor PriceType PegOffset Discretion DiscretionPrice DiscretionPegType DiscretionPegOffset PostOnly RandomReserves Route ExpireTime TradeNow HandleInst BBO Weight Indicator GroupID SharesLocated See Appendix B for more detail

3.3. Type U – Order Replaced

This message acknowledges the receipt and acceptance of a valid Replace Order Message. The data fields from the Replace Order Message are echoed back in this message. Note that the accepted values may differ from the entered values for some fields. You will receive one and only one of these two for each replacement.

Like Accepted Messages, Replaced Messages use the Order State field to denote that a replace was accepted and then automatically canceled when the Order State is Order Dead (“D”). No further Executed Messages nor Canceled Messages will be received for the replaced order unless the Order State is not Order Dead.

The Shares field on the replace indicates how many shares were left exposed when the replacement completed. E.g.:

Enter Order Message for 500 shares

Accepted Message for 500 shares

Executed Messages for 100 shares

Replace Order Message for 500 shares

Replaced Messages with 400 shares

The 400 shares in the Replace Message indicate that 400 shares exist on the book. This same scenario could happen if the execution was in flight back to you while the Replace Order Message was traveling to NASDAQ as follows:

Enter Order Message for 500 shares

Accepted Message for 500 shares

Replace Order Message for 500 shares

Executed Messages for 100 shares on original order

Replaced Messages with 400 shares

Replaced Message

Name	Offset	Len	Value	Notes
Type	0	1	'U'	Replaced Message Identifier
Timestamp	1	8	Timestamp	Expressed as nanoseconds since midnight
OrigUserRefNum	9	4	UserRefNum	The UserRefNum of the order being replaced
UserRefNum	13	4	UserRefNum	The UserRefNum of the replacement order, as entered
Side	17	1	Alpha	The side indicator as entered on the original order in the chain
Quantity	18	4	Integer	Total number of shares outstanding
Symbol	22	8	Alpha	Stock symbol as entered
Price	30	8	Price	The accepted price of the replacement. Please note that the accepted price could potentially be different than the entered price if the order was re-priced by NASDAQ on entry. The accepted price will always be better than or equal to the entered.
Time In Force	38	1	Alpha	The accepted Time in Force of the replacement. Please note that the accepted Time in Force may potentially be different than the entered Time in Force. The accepted Time in Force will always be equal to or shorter in scope than the entered Time in Force
Display	39	1	Alpha	The accepted display type for the order. Y = visible N = hidden A = attributable Z = conformant
Order ReferenceNumber	40	8	Numeric	The day-unique Order Reference Number assigned by NASDAQ to this order
Capacity	48	1	Alpha	The capacity specified on the order
InterMarketSweep Eligibility	49	1	Alpha	Y = eligible N = not eligible
CrossType	50	1	Alpha	The cross type as entered
Order State	51	1	Alpha	L = Order Live D = Order Dead
ClOrdID	52	14	Alpha	Customer order identifier for replacement order
Appendage Length	66	2	Numeric	The length of the remaining Optional Appendage field.

Replaced Message

Name	Offset	Len	Value	Notes
Optional Appendage	68	var	Options	The available options supported on this message are: Firm MinQty MaxFloor PriceType PostOnly ExpireTime TradeNow HandleInst BBO Weight Indicator See Appendix B for more detail

3.4. Type C – Order Canceled

A Canceled Message informs you that an order has been reduced or canceled. This could be acknowledging a Cancel Order Message, or it could be the result of the order timing out or being canceled automatically.

Please note that a Canceled Message does not necessarily mean the entire order is dead; some portion of the order may still be alive.

Canceled Message

Name	Offset	Len	Value	Notes
Type	0	1	'C'	Canceled Order Message
Timestamp	1	8	Timestamp	Expressed as nanoseconds since midnight
UserRefNum	9	4	UserRefNum	The UserRefNum of the order being (partially) canceled
Quantity	13	4	Numeric	The number of shares being decremented from the order. This number is incremental, not cumulative
Reason	17	1	Alpha	Reason the order was reduced or canceled. See Appendix C for the available reasons.

3.5. Type D – AIQ Canceled

AIQ Canceled Message

Name	Offset	Len	Value	Notes
Type	0	1	'D'	Canceled Order Message
Timestamp	1	8	Timestamp	Expressed as nanoseconds since midnight
UserRefNum	9	4	UserRefNum	The UserRefNum of the order being reduced
Decrement Shares	13	4	Numeric	The number of shares just decremented from the order. This number is incremental, not cumulative.
Reason	17	1	Alpha	Reason the order was reduced or canceled. For an AIQ Cancel message, this value will always be "Q".

AIQ Canceled Message

Name	Offset	Len	Value	Notes
Quantity prevented from trading	18	4	Integer	Shares that would have executed if the trade would have occurred. Depending on AIQ type and the sizes of orders in question the value for this field could either be the same or different than the Decrement Shares field. For “Decrement both” they are always the same. For “Cancel oldest” they will be different if the incoming order is smaller than the resting order.
Execution Price	22	8	Price	Price at which the trade would have occurred
Liquidity Flag	30	1	Alpha	Liquidity flag the order would have received. See Appendix E.
AIQ Strategy	31	1	Alpha	AIQ strategy used on the cancelled order.

3.6. Type E – Order Executed

An Executed Order Message informs you that all or part of an order has been executed.

Executed Message

Name	Offset	Len	Value	Notes
Type	0	1	‘E’	Order Executed Message
Timestamp	1	8	Timestamp	Expressed as nanoseconds since midnight
UserRefNum	9	4	UserRefNum	The UserRefNum of the order being executed
Quantity	13	4	Numeric	The incremental number of shares just executed.
Price	17	8	Price	The price at which the shares were executed
Liquidity Flag	25	1	Alpha	Liquidity flag the order would have received. See Appendix E.
Match Number	26	8	Numeric	Assigned by the exchange to identify the trade. Both the buy and the sell executions participating in the trade will share the same match number.
Appendage Length	34	2	Numeric	The length of the remaining Optional Appendage field.

3.7. Type B – Broken Trade

A Broken Trade Message informs you that an execution has been broken. The trade is no longer good and will not clear. The reason for the break is given.

You will always get an Executed Order Message prior to getting a Broken Trade Message for a given execution.

Broken Trade Message

Name	Offset	Len	Value	Notes
Type	0	1	‘B’	Broken Trade Message
Timestamp	1	8	Timestamp	Expressed as nanoseconds since midnight
UserRefNum	9	4	UserRefNum	The UserRefNum of the order whose execution corresponding to given Match Number is being broken
Match Number	13	8	Numeric	Match Number as transmitted in the Executed Order Message being broken.

Broken Trade Message

Name	Offset	Len	Value	Notes
Reason	21	1	Alpha	The reason the trade was broken. The values currently supported are: E = Erroneous (trade deemed clearly erroneous) C = Consent (both parties agreed to break the trade) S = Supervisory (manually broken by supervisory) X = External (trade broken by an external third party)
ClOrdID	22	14	Alpha	Customer order identifier

3.8. Type J – Rejected

A Rejected Message may be sent in response to an Enter Order Message or Replace Order Message if the order or replace cannot be accepted at this time. The reason for the rejection is given.

The Order UserRefNum of a Rejected Message cannot be re-used.

Rejected Order Message

Name	Offset	Len	Value	Notes
Type	0	1	'J'	Rejected Order Message
Timestamp	1	8	Timestamp	Expressed as nanoseconds since midnight
UserRefNum	9	4	UserRefNum	The UserRefNum of the order being rejected
Reason	13	2	Numeric	The reason the order was rejected. See Appendix D.
ClOrdID	15	14	Alpha	Customer order identifier for order being rejected

3.9. Type P – Cancel Pending

A Cancel Pending Message is sent in response to a cancel request for a cross order during a pre-cross late period signifying that it cannot be canceled at this time, but any unexecuted portion of this order will automatically be canceled immediately after the cross completes.

This message will only be sent once for a given UserRefNum. Duplicate cancel requests for the same UserRefNum will be ignored by OUCH.

Cancel Pending Message

Name	Offset	Len	Value	Notes
Type	0	1	'P'	Cancel Pending Message
Timestamp	1	8	Timestamp	Expressed as nanoseconds since midnight
UserRefNum	9	4	UserRefNum	The UserRefNum of the order suffering the pending cancel

3.10. Type I – Cancel Reject

A Cancel Reject Message is sent in response to a partial cancel request (with non-zero "intended order size") for a cross order during a pre-cross late period signifying that it cannot be partially canceled at this time. No automatic cancel will be scheduled for this order. Clients could repeat their request for any unexecuted portion of the order after the cross completes.

This message will only be sent once for a given UserRefNum. Duplicate cancel requests for the same UserRefNum will be ignored by OUCH.

Cancel Reject Message

Name	Offset	Len	Value	Notes
Type	0	1	'I'	Cancel Reject Message
Timestamp	1	8	Timestamp	Expressed as nanoseconds since midnight
UserRefNum	9	4	UserRefNum	The UserRefNum of the order that was cancel-rejected

3.11. Type T – Order Priority Update

A Priority Update Message is sent whenever priority of the order has been changed by the system.

Order Priority Update Message

Name	Offset	Len	Value	Notes
Type	0	1	'T'	Order Priority Update Message
Timestamp	1	8	Timestamp	Expressed as nanoseconds since midnight
UserRefNum	9	4	UserRefNum	The UserRefNum of the order whose priority was updated
Price	13	8	Price	The limit price of the order
Display	21	1	Alpha	The new display for the order Y = Anonymous – Price to Comply
Order Reference Number	22	8	Numeric	The day-unique Order Reference Number assigned by NASDAQ to this order. As a result of the updated priority, a new order reference number will be assigned

3.12. Type M – Order Modified

An Order Modified Message is sent in response to an order modify request.

Order Modified Message

Name	Offset	Len	Value	Notes
Type	0	1	'M'	Order Modified Message
Timestamp	1	8	Timestamp	Expressed as nanoseconds since midnight
UserRefNum	9	4	UserRefNum	The UserRefNum of the order that was modified
Side	13	1	Alpha	The side as entered in the Order Modify Request
Quantity	14	4	Numeric	Total number of shares outstanding

3.13. Type R – Order Restated

The Order Restated Message is sent to indicate that the system has modified an order as part of its order management.

Order Restated Message

Name	Offset	Len	Value	Notes
Type	0	1	'R'	Order Restated Message
Timestamp	1	8	Timestamp	Expressed as nanoseconds since midnight
UserRefNum	9	4	UserRefNum	The UserRefNum of the order being restated
Reason	13	1	Alpha	The reason for this order being restated R = Refresh of display (on an order with reserves) P = Update of displayed price
Appendage Length	14	2	Numeric	The length of the remaining Optional Appendage field.
Optional Appendage	16	var	Options	The available options supported on this message are: Display Quantity Display Price SecondaryOrdRefNum See Appendix B for more detail

3.14. Type Q – Account Query Response

The Account Query Response message in sent in response to an Account Query Request to indicate the next available UserRefNum that can be used to identify new transactions.

Account Query Response Message

Name	Offset	Len	Value	Notes
Type	0	1	'Q'	Account Query Response Message
Timestamp	1	8	Timestamp	Expressed as nanoseconds since midnight
NextUserRefNum	9	4	UserRefNum	The next available UserRefNum

4. Support

If you have any questions or comments about this specification, email tradingservices@nasdaq.com. We welcome suggestions for new features or improvements.

Appendix A – Revision History

Revision #	Date	Change
5.0	10/4/2022	Added the orders entered message to Data Types section
5.0	2/10/2023	Added GroupID and SharesLocated to the Optional Appendage table
5.0	5/2/2023	Removed “Trade Correction Message” section and removed Reference Price and Reference Price Type as optional fields

Appendix B – Optional Fields

OptionTag	Option	Size[1]	Type	Notes	Default
1	SecondaryOrdRefNum	8	Numeric	An alternative order reference number used when publishing the order on the Nasdaq market data feeds (identifying, for example, the displayed portion of a reserve order)	Not applicable
2	Firm	4	Alpha	This field should contain all caps. Firm identifier for the order entry firm. One logical OUCH account can potentially enter orders for multiple firms in a Service Bureau configuration. If this field is blank-filled, the default firm for the OUCH account will be used.	Blank-filled (spaces), use the default firm
3	MinQty	4	Integer	MinQty must be a round lot.	0 (zero), no minimum quantity
4	CustomerType	1	Char	R = Retail Designated Order N = Not Retail Designated (default)	Space, use port default
5	MaxFloor	4	Integer	Represents the portion of your order that you wish to have displayed.	0 (zero), no Max Floor
6	PriceType	1	Char	L = limit (default) P = market peg M = midpoint peg R = primary peg Q = market maker peg m = midpoint	‘L’, limit
7	PegOffset	4	Signed Price	Offset amount for the pegged value.	0 (zero), no peg offset
9	DiscretionPrice	8	Price	Discretion price for Discretionary Order.	0 (zero), no discretion price
10	DiscretionPriceType	1	Alpha	L = limit (default) P = market peg M = midpoint peg R = primary peg	‘L’, limit
11	DiscretionPegOffset	4	Signed Price	Offset amount for the pegged value of the Discretionary Price.	0 (zero), no offset
12	PostOnly	1	Alpha	P = Post Only (Mid-point Post Only not available on BX) N = No (default)	‘N’, no post only
13	RandomReserves	4	Integer	Shares to do random reserve with.	0 (zero), no random reserves
14	Route	4	Alpha		Not applicable
15	ExpireTime	4	Integer	Seconds to live. Must be less than 86400 (number of seconds in a day)	0 (zero), no expire time

1 The Size cited is that of just the optional field itself, not the encasing TagValue element

OptionTag	Option	Size[1]	Type	Notes	Default
16	TradeNow	1	Alpha	Y = yes N = no (default)	Space, use port default
17	HandleInst	1	Alpha	I = imbalance only (CrossType O and C) O = retail order type 1 (CrossType R) T = retail order type 2 (CrossType R) Q = retail price improvement (CrossType R) B = Extended Life + Continuous (CrossType E) D = Direct Listing Capital Raise (CrossType H) R= Retail Price Improvement, Hidden Price Improvement Indicator (CrossType R)	Space, no handling instructions
18	BBO Weight Indicator	1	Alpha	"0" = 0-0.2% "1" = 0.2%-1% "2" = 1%-2% "3" = greater than 2% space = unspecified (default) "S" = Sets the QBBO while joining the NBBO "N" = Improves the NBBO upon entry	Not applicable
22	Display Quantity	4	Numeric	Used in the Order Restated Message only. Represents an update of an order's displayed quantity (i.e. an order with reserves).	Not applicable
23	Display Price	8	Price	Used in the Order Restated Message only. Represents an update of an order's displayed price.	Not applicable
24	Group ID	2	Numeric	Customer Group ID – identifies specific entity within customer firm	0 (zero), no Group ID
25	Shares Located	1	Alpha	Shares located for short sale order Y = yes N = no (default)	'N', no

Appendix C – Order Cancel Reasons

Order Cancel Reason

Reason	Explanation
'D'	This order cannot be executed because of a regulatory restriction (e.g.: trade through restrictions).
'E'	Closed. Any DAY order that was received after the closing cross is complete in a given symbol will receive this cancel reason.
'F'	Post Only Cancel. This Post Only order was cancelled because it would have been price slid for NMS.
'G'	Post Only Cancel. This Post Only order was cancelled because it would have been price slid due to a contra side displayed order on the book
'H'	Halted. The on-open order was canceled because the symbol remained halted after the opening cross completed.
'I'	Immediate or Cancel Order.
'K'	This order cannot be executed because of Market Collars
'Q'	Self Match Prevention. The order was cancelled because it would have executed with an existing order entered by the same MPID.
'S'	Supervisory. The order was manually canceled or reduced by an NASDAQ supervisory terminal.
'T'	Timeout. The Time In Force for this order has expired
'U'	User requested cancel. Sent in response to a Cancel Request Message.
'X'	Open Protection. Orders that are cancelled as a result of the Opening Price Protection Threshold.

Order Cancel Reason

Reason	Explanation
'Z'	System cancel. This order was cancelled by the system.
‘e’	Company Direct Listing Capital Raise order exceeds allowable shares offered

Appendix D – Order Reject Reasons

Order Reject Reasons

Reason	Explanation
0×0001	Quote Unavailable
0×0002	Destination Closed
0×0003	Invalid Display
0×0004	Invalid Max Floor
0×0005	Invalid Peg Type
0×0006	Fat Finger
0×0007	Halted
0×0008	ISO Not Allowed
0×0009	Invalid Side
0×000A	Processing Error
0×000B	Cancel Pending
0×000C	Firm Not Authorized
0×000D	Invalid Min Quantity
0×000E	No Closing Reference Price
0×000F	Other
0×0010	Cancel Not Allowed
0×0011	Pegging Not Allowed
0×0012	Crossed Market
0×0013	Invalid Quantity
0×0014	Invalid Cross Order
0×0015	Replace Not Allowed
0×0016	Routing Not Allowed
0×0017	Invalid Symbol
0×0018	Test
0×0019	Late LOC Too Aggressive
0×001A	Retail Not Allowed
0×001B	Invalid Midpoint Post Only Price
0×001C	Invalid Destination
0×001D	Invalid Price
0×001E	Shares Exceed Threshold
0×001F	Exceeds Maximum Allowed Notional Value
0×0020	Risk: Aggregate Exposure Exceeded
0×0021	Risk: Market Impact
0×0022	Risk: Restricted Stock

Order Reject Reasons

Reason	Explanation
0×0023	Risk: Short Sell Restricted
0×0024	Risk: Order Type Restricted
0×0025	Risk: Exceeds ADV Limit
0×0026	Risk: Fat Finger
0×0027	Risk: Locate Required
0×0028	Risk: Symbol Message Rate Restriction
0×0029	Risk: Port Message Rate Restriction
0×002A	Risk: Duplicate Message Rate Restriction

Appendix E – Liquidity Codes

Liquidity Flags

Flag	Value	Markets
A	Added	All markets
C	Closing Cross	Nasdaq only
e	Retail designated execution that added displayed liquidity	Nasdaq/BX only
H	Halt/IPO Cross	Nasdaq only
i	After hours closing cross	Nasdaq only
J	Non-displayed adding liquidity	All markets
j	RPI (Retail Price Improving) order provides liquidity	BX only
k	Added liquidity via a midpoint order	All markets
K	Halt Cross	Nasdaq only
L	Closing Cross (imbalance-only)	Nasdaq only
M	Opening Cross (imbalance-only)	Nasdaq only
m	Removed liquidity at a midpoint	All markets
N	Passive midpoint execution	Nasdaq/BX only
n	Midpoint Extended Life Order execution	Nasdaq only
O	Opening Cross	Nasdaq only
p	Removed price improving non-displayed liquidity	BX only
q	RMO Retail Order removes non-RPI midpoint liquidity	BX only
R	Removed	All markets
r	Retail Order removes RPI liquidity	BX only
t	Retail Order removes price improving non-displayed liquidity other than RPI liquidity	BX only
0	Supplemental order execution	Nasdaq only
7	Displayed, liquidity-adding order improves the NBBO	Nasdaq/BX only
8	Displayed, liquidity-adding order sets the QBBO while joining the NBBO	Nasdaq/BX only
1	RPI order provides liquidity, No RPII	BX only