

INET FIX Interface Specification

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1. Introduction to NASDAQ (INET) FIX System	2
Overview	2
Users	2
2. Session Information.....	2
ID Fields	2
3. Cancel and Replace – Order Modification	2
4. FIX Message Types – Supported / Unsupported	3
FIX Messages – Supported by NASDAQ	3
<i>Administrative Messages</i>	3
<i>Incoming Messages</i>	3
<i>Outgoing Messages</i>	3
FIX Messages – Not supported by NASDAQ	3
5. Session Protocol Messages.....	4
Message Header.....	4
Logon Message.....	5
6. Application Messages Regarding Orders.....	5
New Order – Single Message	5
Order Cancel Request Message	12
Order Cancel/Replace Request (a.k.a. Order Modification Request)	13
Execution Report	16
Restatement Message	19
ExecRestatementReason.....	21
Order Cancel Reject	22
7. Order Reject/Cancel Reasons	22
Rejected Order Reasons.....	22
Cancel Order Reason	23
8. FIX Order Examples – How to Enter Orders.....	24
NYSE Market on Open Orders.....	24
NYSE Limit on Open Orders	24
NYSE Market on Close	24
NYSE Limit on Close.....	24
9. Revision History	24

1. Introduction to NASDAQ (INET) FIX System

Overview

This document defines NASDAQ's implementation of the Financial Information Exchange (FIX) 4.0, 4.1 and 4.2 protocols. NASDAQ's FIX implementation acts like a router, converting incoming FIX messages into OUCH® messages and back again.

Users

It is assumed that the user of this manual is familiar with the FIX 4.0, 4.1 and 4.2 protocol standard, (can be found at www.fixprotocol.org).

2. Session Information

The first message should be a logon message. No additional messages should be transmitted until NASDAQ has verified the SenderCompID, and a logon is received from NASDAQ.

Note: NASDAQ does NOT support encryption.

ID Fields

SenderCompID sent	The SenderCompID as assigned by NASDAQ. The maximum size is 4 to 6 characters.
SenderCompID returned	The SenderCompID returned within all messages is INET.
TargetCompID	Your TargetCompID should always be INET.

3. Cancel and Replace – Order Modification

When replacing an order the ClOrdID field must be a unique ID for the newest order in the chain of orders and the OrigClOrdID must contain the ClOrdID of the order you are trying to replace / modify.

When canceling an order the ClOrdID field must be a unique ID for the cancel request and the OrigClOrdID must contain the ClOrdID of the order you are trying to cancel.

Only the following fields may be changed for limit and pegged orders:

- Price (tag 44)
- Quantity (38)
- ExecInst (18)
- MaxFloor (111)
- Display Price (9392)
- DisplayExecInst (9391)

Any change will result in your order losing time priority with the exception of a reduction in OrdQty only.

4. FIX Message Types – Supported / Unsupported

FIX Messages – Supported by NASDAQ

Administrative Messages

Standard FIX administrative messages are supported.

Incoming Messages

New Order – Single
Order Cancel Request
Order Cancel/Replace Request (a.k.a. Order Modification Request)

Outgoing Messages

Execution Report
Order Cancel Reject

FIX Messages – Not supported by NASDAQ

Advertisements
Allocation
Allocation ACK
Didn't Know Trade (DK)
Email
Indications of Interest
List Cancel Request
List Execute
List Status
List Status Request
New Order List
News
Quote
Quote Request
Settlement Instructions
Order Status Request

5. Session Protocol Messages

All NASDAQ comments/additions to the FIX specification are listed in BOLD in the "*Comments*" column for each message type.

If a Tag is not explicitly supported by NASDAQ it will be ignored. Your message will not be rejected.

Message Header

Tag	Field Name	Req'd	Comments
8	BeginString	Y	FIX.4.0 or FIX.4.1 or FIX.4.2. Must be the first field in message.
9	BodyLength	Y	Must be second field in the message.
35	MsgType	Y	Must be the third field in the message.
34	MsgSeqNum	Y	
49	SenderCompID	Y	SenderCompID as assigned by NASDAQ . It will always be four to six characters.
56	TargetCompID	Y	"INET"
52	SendingTime	Y	
50	SenderSubID	N	It must be 32 characters or less.
57	TargetSubID	N	Ignored
43	PossDupFlag	N	Always required for retransmitted messages, whether prompted by the sending system or as the result of a resend request.
97	PossResend	N	Required when message may be duplicate of another message sent under a different sequence number.
122	OrigSendingTime	N	Required for message resends. If data is not available set to same value as SendingTime.

Logon Message

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = A
98	EncryptMethod	Y	Not supported.
108	HeartBtInt	Y	
141	ResetSeqNumFlag	N	Indicates both sides of a FIX session should reset sequence numbers. If this flag is present and set to 'Y' NASDAQ will reset the next expected inbound sequence number to one and our next outbound sequence number to one. When using this flag the sequence number of the logon message should be one.
95	RawDataLength	N	Not supported.
96	RawData	N	
	Standard Trailer	Y	

6. Application Messages Regarding Orders

All NASDAQ comments/additions to the FIX specification are listed in BOLD in the "*Comments*" column for each message type.

If a Tag is not supported by NASDAQ "Not supported" will appear in the "*Comments*" column. If you send an unsupported tag, the tag and corresponding data will be ignored. Your message will not be rejected.

New Order – Single Message

Broker Dealer's who wish to electronically submit securities orders to NASDAQ for execution use the new order message type.

Orders can be submitted with special handling instructions and execution instructions.

Handling instructions refer to how NASDAQ should handle the order on its trading floor. The HandInst field is required and it should always be set to 1, which indicates Automated execution order, private, no Broker intervention.

Execution instructions contain explicit directions as to how the order should be executed. The ExecInst field describes how it should be executed. 'N' (No Peg), 'P' (Market Peg), 'R' (Primary Peg), 'Q' (Quoting Obligation Peg) (Market makers only) are supported.

To use Market Maker peg with the default offset (Market Maker Designated Percentage), registered market makers can specify the following:

- Execbroker = INET or <blank>
- Peg type = Q
- Display = A
- Peg difference = none

To use Market Maker peg with a more aggressive offset, registered market makers can specify the

Functionality that is not available will be greyed out in the specifications. Any changes will be conveyed via the NASDAQ OMX Head Trader Alerts or Technical Updates.

following:

- Execbroker = INET or <blank>
- Peg type = R
- Display = A
- Peg difference = (custom offset)

Other participants who submit primary peg orders with offsets will be non-displayed only. Only orders submitted by market makers will be displayed.

ExecBroker should contain explicit directions as to how the order should be routed; if ExecBroker is not specified, the value will be assumed to be NASDAQ. The allowable values are:

- **DOTA** – Behaves similar to the SCAN strategies, except that DOTA only allows non-attributable orders and will accept on-open orders prior to primary market open as well as on-close orders.
- **DOTM** – Behaves similar to the STGY strategies, except that DOTM only allows non-attributable orders and will accept on-open orders prior to primary market open as well as on-close orders.
- **DOTI** – Attempts to execute against orders in the NASDAQ book at a price equal to or better than the NBBO. If unfilled, it will then route to NASDAQ OMX BX (BX) where it will also attempt to execute at the NBBO or better. If still unfilled, the order will route to the NYSE or NYSE Alternext where the order will remain until being executed or cancelled.
- **MOPP** – Route to all protected quotes for display size only. Depending on the time in force (TIF) on the order, the remaining shares will be posted to the NASDAQ book or be cancelled back to the entering party. Once an order posts to NASDAQ it is no longer eligible for routing.
- **STGY** – Behaves similar to SCAN, except that the order will route out again after posting to the NASDAQ book if the order is subsequently locked or crossed.
- **DOTD** – Behaves identical to the DOTA strategy. First attempts to execute against orders available in the NASDAQ book at a price equal to or better than the NBBO; it will then route to other markets including non-exchange and non-Alternative Display Facility (ADF) destinations. If shares remain unexecuted after routing they are posted on the NASDAQ book. Once the order is posted to the NASDAQ book, if it is subsequently locked or crossed, the system will not route out again. Allows non-attributable orders and will accept on-open orders prior to primary market open as well as on-close orders.
- **TFTY** – Routes to Nasdaq BX, dark pools, and NYSE or AMEX without checking the NASDAQ book first.
- **SCAN** – First attempts to execute against orders available in the NASDAQ book at a price equal to or better than the NBBO; it will then route to other markets including non-exchange and non-Alternative Display Facility (ADF) destinations. If shares remain unexecuted after routing they are posted on the NASDAQ book. Once the order is posted to the NASDAQ book, if it is subsequently locked or crossed, the system will not route out again.
- **SKIP** – Behaves like SCAN and opts out of sending orders to Dark Pools
- **SKNY** – Behaves like STGY and opts out of sending orders to Dark Pools

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- **SAVE** - SAVE accesses BX, NASDAQ, NYSE, all other protected quotes and additional destinations. If shares remain unexecuted after routing they are posted on the NASDAQ book. Once the order is posted to the NASDAQ book, if it is subsequently locked or crossed, the system will not route out again.
- **QSAV** - Behaves like SAVE but routes to NASDAQ first.
- **QTFY** - Behaves like TFTY but routes to NASDAQ first.
- **DOTZ** – Behaves like DOTI and opts out of sending orders to Nasdaq BX
- **LIST** - Enables firms to participate in the opening and closing processes of each security's primary listing market and also take advantage of NASDAQ's liquidity during the remainder of the trading day.
- **CART** - will enable firms to check the BX, PSX and NASDAQ book before (optionally) posting to the NASDAQ book
- **SOLV** - will be similar to the SAVE strategy but will route out again after posting if the NASDAQ book is subsequently locked or crossed.
- **QSLV** - QSLV is similar to QSAV except that it will route back out after posting on Nasdaq if crossed or locked.
- **TWAP** - Aims to execute trades at a constant rate over a specified time interval, by opportunistically posting displayed and hidden orders to the NASDAQ book. Will access liquidity on NASDAQ or any other venue available to other order routing strategies when market conditions require it.
- **VWAP** - Aims to execute trades in keeping with the Volume Weighted Average Price over a specified time interval by opportunistically posting displayed and hidden orders to the NASDAQ book. Will access liquidity on NASDAQ or any other venue available to other order routing strategies when market conditions require it.
- **PVOL** - Aims to execute a user-defined percentage of trading volume over a specified time interval by opportunistically posting displayed or hidden orders to the NASDAQ book. Will access liquidity on NASDAQ or any other venue available to other order routing strategies when market conditions require it.

NOTE: only anonymous display types are allowed when sending one of the benchmark order exec brokers.

FIX tag	TWAP	VWAP	PVOL
20001 (start time)	Optional	Optional	Optional
20002 (end time)	Optional	Optional	Optional
20003 (TargetPOV)	n/a	n/a	Required*
20004 (MinPOV)	n/a	n/a	Required*
20005 (MaxPOV)	Optional	Optional	Required*

* Either TargetPOV or the MinPOV & MaxPOV pair must be provided, specifying both sets of options is not valid and will be rejected.

- **ESCN** – Behaves identically to SCAN, but includes a time in force instruction to go live at 8am

if received prior to 8am

- **Directed Orders** – This unique order is directed to a market center other than NASDAQ as specified by the entering party. Directed orders do not check the NASDAQ book and are routed at the entered price and entered quantity. If unexecuted, the order (or unexecuted portion thereof) shall be returned to the entering party. This order type can be entered as an InterMarket Sweep Order (ISO), and may only be used for orders with time-in-force of IOC.

New Order messages received with a duplicate ClOrdID will be ignored, regardless if the PossResend flag is set. The New Order Message is described in the following table:

New Order – Single Message			
Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = D
11	ClOrdID	Y	Unique identifier of the order as assigned by institution. Must be 64 characters or less.
21	HandlInst	Y	This is required by FIX. It should always be set to: 1 = Automated execution order, private, no Broker intervention
55	Symbol	Y	Ticker symbol. The format of the symbol is native INET ¶ ymbology. More information can be found at the following link: http://www.nasdaqtrader.com/Trader.aspx?id=CQSSymbolConvention NOTE: the entire symbol (root and suffix included) needs to be in tag.
54	Side	Y	Side of order Valid values: 1 = Buy 2 = Sell 5 = Sell short 6 = Sell short exempt
38	OrderQty	Y	Required.
40	OrdType	Y	Valid values: 1 = Market 2 = Limit P = Pegged (requires ExecInst = P,M,Q,R,I)
44	Price	N	Price field is required for Limit Orders.
109	ClientID	N	Used for firm identification in third-party transactions. Service bureaus must use this field to specify the firm entering the order. It MUST be a valid NASD assigned MPID. The firm must be a NASD registered broker dealer.
76	ExecBroker	N	The destination to send orders to. Currently INET, DOTA, DOTD, DOTI, DOTM, TFTY, MOPP, STGY, SCAN, SKIP, SKNY, SAVE, QSAV, QTFY, DOTZ, LIST, SOLV, CART, QSLV, TWAP, VWAP, PVOL and Directed Order Destination Codes (please see Directed Codes table below) are available. Will default to "INET" if not specified.
1	Account	N	Must be 32 characters or less.
63	SettlmntTyp	N	Not supported.
64	FutSettDate	N	Not supported.
18	ExecInst	N	Can contain multiple instructions, space delimited. Only 'M' (Midpoint Peg), 'N' (No Peg), 'P' (Market Peg), 'Q' (Quoting Peg), 'R' (Primary Peg), and 'I' (INAV pegging) are supported. 'f' means InterMarket Sweep Order (ISO)
9140	DisplayInst	N	May be used to specify NASDAQ's different display options. Y = Anonymous-Price to Comply A = Attributable-Price to Display

			N = Non-Display I = Imbalance Only P = Post-Only W = Mid-Point Peg Post Only L = Post-Only and Attributable – Price to Display
110	MinQty	N	MinQty is currently supported. MinQty must be a round lot.
111	MaxFloor	N	Represents the portion of your order that you wish to have displayed. It must be a round lot.
114	LocateReqd	N	Required for short sale orders. Must be set to 'N' for all short sale orders. The order entry firm is always responsible for locating the stock on a short sale. Indicates whether the broker is to locate the stock in conjunction with a short sell order. Valid values: N = Indicates the broker is not required to locate
59	TimeInForce	N	Specifies how long the order remains in effect. Absence of this field is interpreted as Market Hours. Valid values: 0 = Market Hours (DAY)* 1 = Extended Hours Order 2 = On Open 3 = Immediate or Cancel (IOC) 5 = Extended Hours Order 6 = Good Till Time (Expire Time should have the end time) 7 = On Close A = Extended Hours Order C= GTC (Market Hours) M= GTC (System Hours) *Order entered after the market close with TIF of DAY will be converted to an extended hours order.
47	Rule80A/OrderCapacity	N	All values are supported. 'A' (agent) is the default.
211	PegDifference	N	Offset amount for the pegged value. NASDAQ uses the FIX standard conservative approach when implementing the peg difference.
58	Text	N	
126	ExpireTime	N	The time the order should be canceled at.
9395	Marketability Instructions	N	Valid values: 0 = None
8020	DisplayRange	N	Amount used to determine the random reserve range. If 200 is specified in this field, and the MaxFloor is set to 1000, the displayed amount will randomly shift between 800 and 1200.
9391	DisplayExecInst	N	This tag is used to peg the display price of the order. NASDAQ currently supports Market Peg ('P'), Primary Peg ('R'), Mid Peg (M), 'Q' (Quoting Peg), 'I' (INAV

			Peg)
9392	DisplayPrice	N	This field contains the price that will be displayed on the NASDAQ book.
9396	DisplayPegDifference	N	This field is used to offset a pegged display price as specified in field 9391.
9355	CrossTradeFlag	N	This specifies the cross in which this order goes live. Valid values: O = Opening cross C = Closing cross I = Intraday cross
129	DeliverToSubID	N	Value set to 'NX' to send a Direct+ order on DOT strategies
20001	Start Time	N	Default Value will be the order enter time or market open, whichever is later. See chart on page 7 for additional details. If start time is before market open, it will be interpreted as market open.
20002	End Time	N	Default value will be Market Close. See chart on page 7 for additional details. If end time is after market close, it will be interpreted as market close.
20003	Target POV	N	For PVOL order type must use EITHER TargetPOV OR MaxPOV & MinPOV at the same time. See chart on page 7 for additional details. Values: 0.01 to 99.00
20004	Min POV	N	For PVOL order type must use EITHER TargetPOV OR MaxPOV & MinPOV at the same time. See chart on page 7 for additional details. If provided, then Max POV is required. Values: 0.01 to 99.00
20005	Max POV	N	For PVOL order type must use EITHER TargetPOV OR MaxPOV & MinPOV at the same time. See chart on page 7 for additional details. If provided, then Min POV is required. Values: 0.01 to 99.00
	Standard Trailer	Y	

Directed Order Destination Codes	
Market Center	Destination Code
AMEX	ISAM
ARCA/PCX	ISPA

Functionality that is not available will be greyed out in the specifications. Any changes will be conveyed via the NASDAQ OMX Head Trader Alerts or Technical Updates. **11**

Nasdaq OMX BX	ISBX
CBOE	ISCB
CHSX	ISCX
CINN/NSX	ISCN
NYSE	ISNY
BATS	ISBZ
BATS Y Exchange	ISBY
EDGA	ISNA
EDGX	ISNX
Nasdaq OMX PSX	ISPX

Order Cancel Request Message

The Order Cancel Request Message requests the cancellation of all of the remaining quantity of an existing order. The request will only be accepted if the order can successfully be pulled back from the exchange floor without executing.

Note that the Order Cancel/Replace Request should be used to partially cancel (reduce) an order.

A cancel request is assigned a ClOrdID and is treated as a separate entity. If rejected, the ClOrdID of the cancel request will be sent in the Cancel Reject message, as well as the ClOrdID of the actual order in the OrigClOrdID field. The ClOrdID assigned to the cancel request must be unique amongst the ClOrdID assigned to regular orders and replacement orders.

The format of the cancel request message is shown in the following table:

Order Cancel Request Message			
Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = F
41	OrigClOrdID	Y	ClOrdID of the previous order (NOT the initial order of the day) when canceling or replacing an order.
11	ClOrdID	Y	Unique ID of cancel request as assigned by the institution. Must be 64 characters or less.
55	Symbol	Y	Ticker symbol. The format of the symbol is native INET symbology. More information can be found at the following link: http://www.nasdaqtrader.com/Trader.aspx?id=CQSSymbolConvention NOTE: the entire symbol (root and suffix included) needs to be in tag.
54	Side	Y	Side of order – Valid values: 1 = Buy 2 = Sell 5 = Sell short 6 = Sell short exempt
38	OrderQty	Y	NASDAQ does not support CashOrderQty. Therefore, OrderQty is required.
37	OrderID	N	Unique identifier of most recent order as assigned by broker.
109	ClientID	N	Used for firm identification in third-party transactions. Service bureaus must use this field to specify the firm canceling the order. It MUST be a valid NASD assigned MPID. The firm must be a NASD registered broker dealer.
	Standard Trailer	Y	

Order Cancel/Replace Request (a.k.a. Order Modification Request)

The Order Modification Request is used to change the parameters of an existing order.

Do not use this message to cancel the remaining quantity of an outstanding order, use the Cancel Request message for this purpose.

The Order Modification request will only be accepted if the order can successfully be pulled back from the exchange floor without executing. Requests that cannot be processed will be rejected using the Cancel Reject message. The Cancel Reject message will provide the ClOrdID and OrigClOrdID values that were specified on the Order Modification Request message for identification. Note that while it is necessary for the ClOrdID to change and be unique, the broker's OrderID field does not necessarily have to change as a result of the Order Modification request.

The following fields can be updated in the cancel replace messages:

- Price (tag 44)
- Quantity (38)
- ExecInst (18)
- MaxFloor (111)
- Display Price (9392)
- DisplayExecInst (9391)

Functionality that is not available will be greyed out in the specifications. Any changes will be conveyed via the NASDAQ OMX Head Trader Alerts or Technical Updates. **13**

All other fields should be retransmitted as sent in the original order.

The Order Modification Request Message is described in the following table:

Order Cancel/Replace Request Message			
Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = G
41	OrigClOrdID	Y	ClOrdID of the previous order (NOT the initial order of the day) when canceling or replacing an order.
11	ClOrdID	Y	Unique identifier of replacement order as assigned by institution. Note that this identifier will be used in ClOrdID field of the Cancel Reject Message if the replacement request is rejected. Must be 64 characters or less.
21	HandlInst	Y	This is required by FIX. It should always be set to: 1 = Automated execution order, private, no Broker intervention
55	Symbol	Y	Ticker symbol. The format of the symbol is native INET symbology. More information can be found at the following link: http://www.nasdaqtrader.com/Trader.aspx?id=CQSSymbolConvention NOTE: the entire symbol (root and suffix included) needs to be in tag.
54	Side	Y	Side of order – Valid values: 1 = Buy 2 = Sell 5 = Sell short 6 = Sell short exempt Must match original side.
38	OrderQty	Y	NASDAQ does not support CashOrderQty. Therefore, OrderQty is required.
40	OrdType	Y	Valid values: 1 = Market Peg 2 = Limit P = Pegged (requires ExecInst = P,M,Q,R,I)
44	Price	N	Price field is required for Limit Orders.
114	LocateReqd	N	Indicates whether the broker is to locate the stock in conjunction with a short sell order. Valid values: Y = Indicates the broker is responsible for locating the stock N = Indicates the broker is not required to locate
37	OrderID	N	Unique identifier of most recent order as assigned by broker.
109	ClientID	N	Used for firm identification in third-party transactions. Service bureaus must use this field to specify the firm canceling the order. It MUST be a valid NASD assigned MPID. The firm must be a NASD registered broker dealer.
18	ExecInst	N	Can contain multiple instructions, space delimited. Only 'M' (Midpoint Peg), 'N' (No-Peg), 'P' (Market Peg), 'Q' (Quoting Peg), 'R' (Primary Peg), and 'I' (INAV pegging) are supported.

			'f' means Intermarket Sweep Order (ISO)
9140	DisplayInst	N	May be used to specify NASDAQ's different display options. Y = Anonymous-Price to Comply A = Attributable-Price to Display N = Non-Display I = Imbalance Only P = Post-Only W = Mid-Point Peg Post Only L = Post-Only and Attributable – Price to Display
59	TimeInForce	N	The time in force of the original order carries through to all replacements.
47	Rule80A/OrderCapacity	N	The Rule80A (capacity) of the original order carries through to all replacements.
1	Account	N	Not supported. The account of the original order carries through to all replacements.
110	MinQty	N	Not supported. The MinQty of the original order carries through to all replacements.
111	MaxFloor	N	Represents the portion of your order that you wish to have displayed. It must be a round lot.
	Standard Trailer	Y	

Execution Report

The execution report message is used to:

1. Confirm the receipt of an order
2. Confirm changes to an existing order (i.e. accept cancel and replace requests)
3. Relay order status information
4. Relay fill information on working orders
5. Reject orders
6. Report post-trade fees calculations associated with a trade

Each execution message will contain information that will describe the current state of the order and execution status as understood by NASDAQ. State changes will be sent as separate messages and will not be used to also convey new partial fill details:

Execution Report			
Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = 8
37	OrderID	Y	OrderID, as assigned by NASDAQ, is required to be unique for each chain of orders.
17	ExecID	Y	Identifier of execution message as assigned by broker (will be 0 (zero) for ExecTransType=3 (Status)).
20	ExecTransType	Y	Identifies transaction type Valid values: 0 = New 1 = Cancel Trade breaks will be sent with an ExecTransType of '1'. NASDAQ does not support trade corrections.
76	ExecBroker	Y	The destination to send orders to. Currently INET, DOTA, DOTD, DOTI, DOTM, TFTY, MOPP, STGY, SCAN, SKIP, SKNY, SAVE, QSAV, QTFY, DOTZ, LIST, SOLV, CART, QSLV, TWAP, VWAP, PVOL, and Directed Order Destination Codes (please see Directed Codes table below) are available. Will default to "INET" if not specified.
150	ExecType	Y	Describes the type of execution report. Same possible values as OrdStatus.
39	OrdStatus	Y	Describes the current state of a CHAIN of orders, same scope as OrderQty, CumQty, LeavesQty, and AvgPx Valid Values: 0 = New 1 = Partial Fill 2 = Filled 4 = Canceled 5 = Replaced 6 = Pending Cancel 8 = Rejected
55	Symbol	Y	Ticker symbol. The format of the symbol is native INET ¶ ymbology. More information can be found at the following link: http://www.nasdaqtrader.com/Trader.aspx?id=CQSSymbolConvention NOTE: the entire symbol (root and suffix included) needs to be in tag.
54	Side	Y	
38	OrderQty	Y	
32	LastShares	Y	Quantity of shares bought/sold on this (last) fill.
31	LastPx	Y	Price of this (last) fill.
151	LeavesQty	Y	Amount of shares open for further execution. If the OrdStatus is Canceled, DoneForTheDay, Expired, Calculated, or Rejected (in which case the order is no longer active) then LeavesQty could be 0, otherwise LeavesQty = OrderQty – CumQty.

14	CumQty	Y	Currently executed shares for chain of orders.
6	AvgPx	Y	Calculated average price of all fills on this order.
19	ExecRefID	N	Required for Cancel and Correct ExecTransType messages
1	Account	N	As specified in the NewOrder
11	ClOrdID	N	As specified in the NewOrder
44	Price	N	As specified in the NewOrder
211	PegDifference	N	As specified in the NewOrder
41	OrigClOrdID	N	ClOrdID of the previous order (NOT the initial order of the day) when canceling or replacing an order.
109	ClientID	N	Used for firm identification in third-party transactions. If a ClientID was specified in the original order then it will be returned in all subsequent execution reports.
18	ExecInst	N	Can contain multiple instructions, space delimited. Only 'M' (Midpoint Peg), 'N' (No-Peg), 'P' (Market Peg), 'Q' (Quoting Peg), 'R' (Primary Peg), and 'I' (INAV pegging) are supported. 'f' means Intermarket Sweep (ISO)
9140	DisplayInst	N	May be used to specify NASDAQ's different display options. Y = Anonymous-Price to Comply A = Attributable-Price to Display N = Non-Display I = Imbalance Only
75	TradeDate	N	Used when reporting other than current day trades.
59	TimeInForce	N	Absence of this field indicates Market Hours order
40	OrdType	N	Valid values: 2 = Limit P = Pegged (requires ExecInst of P,M,Q,R,I)
60	TransactTime	N	Time of execution/order creation (expressed in GMT).
47	Rule80A/OrderCapacity	N	All values are supported. 'A' (agent) is the default.
58	Text	N	Free format text string,
9882	LiquidityFlag	N	Will be returned within all execution reports that contain a partial or full fill. See Liquidity Flags Table below for values
111	MaxFloor	N	As specified in the NewOrder
	Standard Trailer	Y	

Liquidity Flags	
Flag	Value
A	Added
R	Removed
X	Routed

Functionality that is not available will be greyed out in the specifications. Any changes will be conveyed via the **18** NASDAQ OMX Head Trader Alerts or Technical Updates.

D	DOT
F	Opening Trade (on NYSE)
G	On-Close order (on NYSE)
J	J = Non-displayed adding liquidity
O	Open Cross (billable)
M	Open Cross (non-billable)
C	Closing Cross (billable)
L	Closing Cross (non-billable)
H	Halt/IPO Cross (billable)
K	Halt/IPO Cross (billable)
I	Intraday/Post-Market Cross
Y	Re-Routed by NYSE
S	Odd Lot Execution (on NYSE)
U	Added Liquidity (on NYSE)
B	Routed to BX
E	NYSE Other
P	Routed to PSX
T	Opening Trade (on ARCA)
Z	On-Close order (on ARCA)
m	Removed liquidity at a midpoint
k	Added liquidity via a midpoint order
<u>7</u>	<u>Displayed, liquidity-adding order improves the NBBO</u>
<u>8</u>	<u>Displayed, liquidity-adding order sets the QBBO while joining the NBBO</u>

Restatement Message

This message will tell the user the amount their orders were reduced down to as a result of a partially cancelled quantity.

Restatement			
Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = 8
37	OrderID	Y	OrderID, as assigned by NASDAQ, is required to be unique for each chain of orders.
17	ExecID	Y	Identifier of execution message as assigned by broker (will be 0 (zero) for ExecTransType=3 (Status)).
20	ExecTransType	Y	Identifies transaction type Valid values: 0 = New 1 = Cancel Trade breaks will be sent with an ExecTransType of '1'. NASDAQ does not support trade corrections.
76	ExecBroker	Y	The destination to send orders to. Currently INET, DOTA, DOTD, DOTI, DOTM, TFTY, MOPP, STGY, SCAN, SKIP, SKNY, SAVE, QSAV, QTFY, DOTZ, LIST, SOLV, CART, QSLV, TWAP, VWAP, PVOL and Directed Order Destination Codes (please see Directed Codes table below) are available. Will default to "INET" if not specified.
150	ExecType	Y	Describes the type of execution report. For restatement, this value will always be: D = Restated
39	OrdStatus	Y	Describes the current state of a CHAIN of orders, same scope as OrderQty, CumQty, LeavesQty, and AvgPx Valid Value for restatement will be: 0 = New
55	Symbol	Y	Ticker symbol. The format of the symbol is native INET ¶ ymbology. More information can be found at the following link: http://www.nasdaqtrader.com/Trader.aspx?id=CQSSymbolConvention NOTE: the entire symbol (root and suffix included) needs to be in tag.
54	Side	Y	
38	OrderQty	Y	
32	LastShares	Y	Quantity of shares bought/sold on this (last) fill. Fore restatement, this value will always be "0".
31	LastPx	Y	Price of this (last) fill.
151	LeavesQty	Y	Amount of shares open for further execution. If the OrdStatus is Canceled, DoneForTheDay, Expired, Calculated, or Rejected (in which case the order is no longer active) then LeavesQty could be 0, otherwise LeavesQty = OrderQty – CumQty.
14	CumQty	Y	Currently executed shares for chain of orders.
6	AvgPx	Y	Calculated average price of all fills on this order.
19	ExecRefID	N	Required for Cancel and Correct ExecTransType messages

Functionality that is not available will be greyed out in the specifications. Any changes will be conveyed via the **20** NASDAQ OMX Head Trader Alerts or Technical Updates.

1	Account	N	As specified in the NewOrder
11	CIOrdID	N	As specified in the NewOrder
44	Price	N	As specified in the NewOrder
211	PegDifference	N	As specified in the NewOrder
41	OrigCIOrdID	N	CIOrdID of the previous order (NOT the initial order of the day) when canceling or replacing an order.
109	ClientID	N	Used for firm identification in third-party transactions. If a ClientID was specified in the original order then it will be returned in all subsequent execution reports.
18	ExecInst	N	Can contain multiple instructions, space delimited. Only 'M' (Midpoint Peg), 'N' (No-Peg), 'P' (Market Peg), 'Q' (Quoting Peg), 'R' (Primary Peg), and 'I' (INAV pegging) are supported. 'f' means Intermarket Sweep (ISO)
9140	DisplayInst	N	May be used to specify NASDAQ's different display options. Y = Anonymous-Price to Comply A = Attributable-Price to Display N = Non-Display I = Imbalance Only P = Post-Only W = Mid-Point Peg Post Only L = Post-Only and Attributable – Price to Display
75	TradeDate	N	Used when reporting other than current day trades.
59	TimeInForce	N	Absence of this field indicates Market Hours order
40	OrdType	N	Valid values: 2 = Limit P = Pegged (requires ExecInst of P,M,Q,R,I)
60	TransactTime	N	Time of execution/order creation (expressed in GMT).
47	Rule80A/OrderCapacity	N	All values are supported. 'A' (agent) is the default.
58	Text	N	Free format text string,
9882	LiquidityFlag	N	Will be returned within all execution reports that contain a partial or full fill. See Liquidity Flags Table below for values
111	MaxFloor	N	As specified in the NewOrder
378	ExecRestatementReason	Y	For restatement, this value will always be: 5 = Partial decline of OrderQty
	Standard Trailer	Y	

Order Cancel Reject

The order cancel reject message is issued by NASDAQ upon receipt of a Cancel Request or Cancel/Replace Request Message that cannot be honored.

The format of the Order Cancel Reject Message is as follows

Tag	Field Name	Req'd	Comments
	Standard Header	Y	MsgType = 9
37	OrderID	Y	If the cancel reject is for an unknown order this field will contain the text "Unknown". Otherwise, it will contain the OrderID of the last order in the chain of orders.
11	CIOrdID	Y	Unique order id assigned by broker to the cancel request or to the replacement order.
41	OrigCIOrdID	Y	CIOrdID that could not be canceled/replaced. CIOrdID of the previous order (NOT the initial order of the day) when canceling or replacing an order.
39	OrdStatus	Y	OrdStatus value after this cancel reject is applied.
109	ClientID	N	Used for firm identification in third-party transactions. For known orders this will contain the ClientID specified in the original order.
102	CxlRejReason	N	Code to identify reason for cancel rejection. Valid values: 0 = Too late to cancel 1 = Unknown order
58	Text	N	See "Rejected Order Reasons" in section 7
	Standard Trailer	Y	

7. Order Reject/Cancel Reasons

The FIX Text field, tag 58, will be returned within all reject and cancel messages and will contain a description of the reject or cancel.

Rejected Order Reasons

Reason	Explanation
Y	The LocateReqd tag was not set to 'N'
C	Rash is not yet open
I	Invalid side
E	Invalid peg type
L	Invalid Firm
Z	Order Size is more then maximum shares allowed
O	Unknown Error.
F	Invalid marketability value
B	Quote not available for pegged order
P	Pegging is not allowed

Functionality that is not available will be greyed out in the specifications. Any changes will be conveyed via the NASDAQ OMX Head Trader Alerts or Technical Updates.

X	The order does not have a valid price.
R	Routing not enabled
G	Specified routing destination is temporarily down
J	Internal NASDAQ error
N	Order attribute specified that the routing destination does not support
D	Bad reserve value
T	Port is in Test Only mode
H	The stock is halted
S	Invalid stock
Q	Invalid order qty
K	Invalid Min Qty
W	Routing destination is not supported
A	Advanced functionality not supported
U	NASDAQ was asked to reject resent orders and this order was resent
V	Invalid Order Type

Cancel Order Reason

Reason	Explanation
"U"	User requested cancel. Sent in response to a Cancel Request Message.
"I"	Immediate or Cancel Order.
"T"	Timeout. The Time In Force for this order has expired.
"S"	Supervisory. The order was manually canceled or reduced by an NASDAQ supervisory terminal.
"D"	This order cannot be executed because of a regulatory restriction (e.g.: trade through restrictions).
"Q"	Self Match Prevention. The order was cancelled because it would have executed with an existing order entered by the same MPID.
"Z"	System cancel. This order was cancelled by the system.
"C"	Cross cancel

Pre-Trade Risk Management (PRM) Reasons

Reason	Explanation
a	invalid message format
b	No quote
c	invalid account
d	short sale violation
e	order rejected due to ISO order check
f	order rejected due to GTC order check
g	order rejected due to pre-market order check
h	order rejected due to post-market order check
i	order rejected due to the delayed checking flag turned off
j	Exceeded maximum shares threshold
k	Exceeded maximum value threshold
m	order rejected due to previous command to reject all orders
n	order rejected due to invalid price (fat finger)
o	Order rejected due to symbol not listed on easy to borrow list
p	PRM is Not Available
q	Invalid Message

Functionality that is not available will be greyed out in the specifications. Any changes will be conveyed via the NASDAQ OMX Head Trader Alerts or Technical Updates.

r	Snap Is In Process
s	Symbol Halted
t	Order Rejected Due To On Open
u	Order Rejected Due To On Close
v	Order Rejected Due To Program Trading
{	Order rejected due to symbol not listed on restricted list

8. FIX Order Examples – How to Enter Orders

The following examples illustrate how to send orders to the NYSE Opening and Closing Cross and Direct+.

NYSE Market on Open Orders

Tag 76 = DOTA
Tag 59 = 2
Tag 40 = 1
Tag 44 = 0 or not sent

NYSE Limit on Open Orders

Tag 76 = DOTA
Tag 59 = 2
Tag 40 = 2
Tag 44 = Limit Price

NYSE Market on Close

Tag 76 = DOTA
Tag 59 = 7
Tag 40 = 1
Tag 44 = 0 or not sent

NYSE Limit on Close

Tag 76 = DOTA
Tag 59 = 7
Tag 40 = 2
Tag 44 = Limit Price

NYSE Direct + Order

Tag 76 = DOTA
Tag 129 = NX
Tag 59 = 0
Tag 40 = 2
Tag 44 = Limit Price

9. Revision History

Revision #	Date	Change
1.0	2/22/05	Document Creation
1.1	4/28/05	Added Reject Reasons.
1.2	1/17/06	Removed Mid peg information

Functionality that is not available will be greyed out in the specifications. Any changes will be conveyed via the **24** NASDAQ OMX Head Trader Alerts or Technical Updates.

1.3	2/28/06	Added examples on how to send in opening/closing cross orders
1.4	4/27/06	Added order attribution
1.5	6/5/06	<p>Added CrossTradeFlag(9355), C and M to TimeInForce(59), E and F to ExecInst(18), and I to DisplayInst(9140)</p> <p>Added liquidity flag 'C' for Cross execution—non-billable</p> <p>Added liquidity flag 'B' for Cross execution--billable</p> <p>Non-billable liquidity codes are no longer supported</p> <p>Replaced references to INET with "NASDAQ" or "the system"</p> <p>Replaced references to subscribers with "participants"</p> <p>Added tag 129 for "Direct +" order type</p> <p>Removed "Cancel Order Reason": 'D' and 'M'</p> <p>Changed "Good till Crossing" to "Good to System Hours"</p>
1.6	7/24/06	Added Liquidity Flag Value table
1.7	8/1/06	Added TIF "R" = re-route order every 4 minutes or so (for some routing strategies)
1.8	10/3/06	<p>Added TIF "1" = Good Till System Hours (GTC)</p> <p>Added TIF "A" = Participate in all Intraday Crosses</p>
1.9	10/30/06	Added ExecInst, tag 18= 'f' for ISO orders
1.10	01/10/07	<p>Updated values and added value 'C' for Tag 9140</p> <p>Added value 'M' for Tag 18 and Tag 9391</p>
1.11	02/06/07	Added tag 76 ExecBroker value "SWIM"
1.12	02/22/07	<p>Added Directed Orders to tag 76</p> <p>Added Directed Order Destination Codes table</p>
1.13	05/1/07	Added Liquidity Flag "Y" = Re-Routed by NYSE
1.14	06/14/07	<p>Added tag 76 ExecBroker value "MOPP"</p> <p>Removed tag 76 ExecBroker value "SWIM"</p>
1.15	6/27/07	<p>Removed tag 65 SymbolSfx field</p> <p>Added description of tag 55 Symbol field to specify native INET symbology.</p>
1.16	7/25/07	<p>Added tag 76 ExecBroker value "DOTI"</p> <p>Added tag 76 ExecBroker value "DOTD"</p> <p>Removed tag 76 ExecBroker value "DOTP"</p>
1.17	10/05/07	Updated Tag 54. Side of order value 6 = Short Sell
1.18	11/27/07	Updated TIF for Market Hours (DAY) orders.
1.19	12/14/07	Updated TIF for values 1, 5, A, C and M.
1.20	01/02/08	Updated Liquidity Code for values "F" and "G"
1.21	01/15/08	<p>Removed DOTN and DOTO routing strategies.</p> <p>Changed DOTN to DOTA for Section 8 FIX Order Examples – How To Enter Orders</p>

Functionality that is not available will be greyed out in the specifications. Any changes will be conveyed via the NASDAQ OMX Head Trader Alerts or Technical Updates.

1.22	01/28/08	Updated Execution Report for Tag 76
1.23	03/26/08	Removed tag 9140 Display value "C" Added tag 76 ExecBroker value "SKIP" Added tag 76 ExecBroker value "SKNY" Added Pre-trade Risk Management reject reasons
1.24	05/12/08	Added Liquidity Flag "J"
1.25	07/29/08	Removed PHLX as a Directed Order destination.
1.26	8/26/08	Added Directed ISO destination "ISBZ"
1.27	9/09/08	Updated definitions for routing strategies.
1.28	2/12/09	Updated Liquidity Code for values "G" Added Liquidity Code "S"
1.29	2/20/09	Updated Liquidity Code for values "F" Added Liquidity Code "U"
1.30	3/25/09	Added Liquidity Code "B"
1.31	4/14/09	Added Cancel order reason code "D" Added tag 76 ExecBroker value "TFTY" Revised description to ExecBroker value "DOTI"
1.32	5/15/09	Added Display flag "S" Added ExecBroker value "SCNF" Added ExecBroker value "SGNF" Revised description of liquidity value "J" Revised description of liquidity value "A"
1.33	6/5/09	Revised description of cancelled order reason "T" for anti-internalization
1.34	6/24/09	Revised description of cancelled order reason "I" for anti-internalization Revised description of cancelled order reason "T" for removing anti-internalization
1.35	7/1/09	Revised description of cancelled order reason "I" for removing anti-internalization Added cancel order reason code "Q" for anti-internalization
1.36	7/24/09	Added Restatement message type
1.37	8/10/09	Removed references to Flash orders (including SCNF and SGNF routing strategies) Added liquidity code flag "E" for NYSE Other
1.38	12/10/09	Added ExecBroker value "SAVE" Added ExecBroker value "QSAV" Added ExecBroker value "QTFY" Replaced "anti-internalization" language with "self match prevention"
1.39	3/3/10	Added Execbroker value "DOTZ"
1.40	6/16/10	Added Directed order destination code "ISNA" Added Directed order destination code "ISNX" Added Directed order destination code "ISPX" Removed value "R" from tag 9395 Removed value "4" from TIF
1.41	8/12/10	Removed Directed order destination code "ISGA" Removed Directed order destination code "ISGX" Re-introduced short sell exempt value in the buy

Functionality that is not available will be greyed out in the specifications. Any changes will be conveyed via the **26** NASDAQ OMX Head Trader Alerts or Technical Updates.

		sell indicator field Removed DNI/DNR instructions from tag 18
1.42	8/26/10	Added Directed order destination code "ISBY"
1.43	9/23/10	Added Liquidity Code "P"
1.44	1/10/11	Added Execbroker value "LIST" Added Liquidity Code "T", "Z"
1.45	2/22/11	Added Execbroker value "SOLV" Added Execbroker value "CART" Added Execbroker value "QSLV"
1.46	4/4/11	Added Cancel order reason code "K"
1.47	6/7/11	Updated PRM reject reasons
1.48	7/7/11	Removed inactive directed order destinations: ISDA, ISIS, ISLF, ISTR
1.49	7/26/11	Revised description of which fields can be updated in cancel replace message
1.50	10/4/11	Added Post only display values "P", "W", "L" Removed IOC requirement for minimum quantity orders
1.51	11/07/2011	Added numeric liquidity flag values
1.52	03/19/2012	Added description for TWAP, VWAP, PVOL routing strategies Added tag 20001 to new order – single message Added tag 20002 to new order – single message Added tag 20003 to new order – single message Added tag 20004 to new order – single message Added tag 20005 to new order – single message
1.53	04/19/2012	Added Liquidity Code "m", "k"
1.54	06/19/2012	Added ExecInst value "Q" Removed "K" cancel reason value Added "C", "Z" cancel reason values Removed "R" time in force value
1.55	10/02/2012	Added ExecInst value "I"
1.56	10/17/2012	Added description for ESCN routing strategy Greyed out benchmark routing strategy and added footer to denote functionality not available
1.57	10/23/2012	Added Liquidity Code "7", "8"

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