Nasdaq Nordic – FIX Order Entry

INET Nordic

Nordic Equities Market

Revision 2.01.10
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Approved

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Document History

Revision	Published	Author(s)	Summary of Changes
2.00.0	02 Sep 2021	StSr	New specification template Updated sections 1 and 2 Removed the Session Level Messages section. (see FIXT.1.1) Field 11 ClOrdID changed from maximum 20 to 14 characters Field 9140 DisplayInst removed I = Imbalance only Fields 20107 and 20108 added in section 4.2.1
2.00.1	11 Nov 2021	StSr	Updated description for field 2594
2.00.2	16 Feb 2022	StSr	Section 3.1.1 – Tag 20108 added Tag 39 – removed 5=Replaced Tag 75 – Comments updated Tag 150 – removed 1=Partial Fill and 2=Filled, added F=Trade Tag 20107 – Field name changed from Prior to Original and Comments updated Tag 20108 – Comments updated Tag 18 – Comments updated
2.00.3	15 Mar 2022	StSr	Tag 150 added H=Trade Cancel Removed Tag 198 from 4.2.2 Removed Tag 38 from 4.1.2
2.00.4	28 Mar 2022	StSr	Section 4.2.1 Execution Report – changed description (Tag 150 – removed 1=Partial Fill and 2=Filled, added F=Trade) for the following Tag's: 6, 30, 31, 32, 375, 9882, 2667, 1430, 625, 574, 828, 1115, and 1724 Section 4.2.1 Tag 9882 Modified description for Trade cancel
2.00.5	05 Apr 2022	StSr	Section 4.2.1 – Removed Tag 20 and updated description for Tag 19 Section 4.2.2 – Updated message description
2.00.6	12 Jul 2022	StSr	Modified descriptions for Tag 37, Tag 151 and Tag 198 in 4.2.1 Updated message and field descriptions + added Tag 9355, CrossTradeFlag, to OrderCancel/Replace Request message in 4.1.3
2.00.7	30 Aug 2022	StSr	Modified description for Tag 14 in 4.2.1
2.00.8	13 Sep 2022	StSr	Removed Tag 527 SecondaryExecID and Tag 1040 SecondaryTradeID in 4.2.1 and 7.1
2.01.0	24 Nov 2022	StSr Rnth	Modified description for Tag 6, Tag 31, Tag 32 and Tag 151 in 4.2.1 – Execution Report, and for Tag 37 in 4.1.3 – Order Cancel/Replace Request Modified description in 3.3.3– Reserve Orders, 3.3.7– Market Price Orders. Added section 3.3.9- Pegged Order in Lit Book, 3.3.4– Hidden Orders

Revision	Published	Author(s)	Summary of Changes
			Added Tag]1138] – DisplayQty to section 4.2.1 – Execution Report used to relay the current displayed quantity on reserve order restatements. Modified description of restatement message usage in section 4.2.1 – Execution Report
2.01.1	07 Feb 2023		Modified description for Tag 9355 in 4.2.1 Removed the DAAN, NAOD and DANY routing strategies in 3.3.1 and 4.1.1 Added description in 4.2.1
2.01.2	16 Mar 2023		Updated description for restatements and Tag 625 in 4.2.1
2.01.3	28 Apr 2023		Updated description for Tag 59 in 4.1.1 and Tag 102 in 4.2.2
2.01.4	04 May 2023		Additional example added in 3.3.7
2.01.5	13 Sep 2023		Added section 3.3.10 Dark Lit Sweep Added Tag 20109 OrderCondition in 4.1.1, 4.2.1, Appendix A and B
2.01.6	11 Oct 2023	RnTh	Added value “P” in FIX Tag [625] – TradingSessionSubID in Execution Reports (section 4.2.1), to flag AOD trades according to MMT 4.1, Level 2 – Trading Mode
2.01.7	20 Feb 2024	StSr	Added DLTS routing strategy in 3.3.1 and in Tag [76] ExecBroker in 4.1.1
2.01.8	16 May 2024	StSr	Added Tag 582 – CustOrderCapacity in 4.1.1, 4.2.1 and Appendix A
2.01.9	12 Jan 2026	StSr	Updated enum value for On Demand Auction in Tag [625] in 4.2.1
2.01.10	3 Feb 2026	StSr	Updated description in Tag [1430] in 4.2.1

Table of Contents

1 Overview

This document contains the FIX 5.0 SP2 protocols used by Nasdaq Nordic and Nasdaq Baltic[1], the functionality of FIX, for entering orders.

This document does not consider messages transmitted via other entry points into Nasdaq Nordic.

Users should be familiar with the FIX 5.0 SP2 EP228 specifications, as this document supplements those specifications.

1.1 Related Documentation

Specification documents can be located at:

https://www.nasdaq.com/solutions/european-trading-services

It is assumed that the user of this manual is familiar with FIX 5.0 SP2 standard, which may be found at http://www.fixtradingcommunity.org/.

Session level considerations and messages are found in the Nasdaq Nordic FIXT 1.1 Transport Layer protocol specification.

[1] Nasdaq Copenhagen, Nasdaq Helsinki, Nasdaq Iceland, Nasdaq Riga, Nasdaq Stockholm, Nasdaq Tallinn and Nasdaq Vilnius are respectively brand names for Nasdaq Copenhagen A/S, Nasdaq Helsinki Ltd, Nasdaq Iceland hf., Nasdaq Riga AS, Nasdaq Stockholm AB, Nasdaq Tallinn AS and AB Nasdaq Vilnius. Nasdaq Nordic represents the common offering by Nasdaq Copenhagen, Nasdaq Helsinki, Nasdaq Iceland and Nasdaq Stockholm. Nasdaq Baltic represents the common offering by Nasdaq Tallinn, Nasdaq Riga and Nasdaq Vilnius.

2 Session Overview

Please refer to the **Nasdaq Nordic FIXT 1.1 Transport Layer** specification for Session level considerations and messages. Note that the BeginString [8] = "FIXT.1.1" is expected for this protocol.

2.1 Connectivity

You need to have a separate connection to send Nasdaq FIX order messages and Nasdaq FIX trade reporting messages.

FIX Order Entry messages are sent with:

- TargetCompID [56] = INORD
- TargetSubID [57]= S

Nasdaq outbound messages will relay SenderSubID [50] = S.

2.2 Cancel on Disconnect/Suspend on Disconnect

With INET Nordic, you can have your resting orders cancelled upon disconnect by contacting Nasdaq and we will configure your ports for this. Nasdaq does not support "suspend on disconnect" on an order-by-order basis.

If you have requested this configuration, we will cancel all resting orders that are open on the book, based on port configuration, in the event that your port is disconnected. In the event of a severe failure on the Host side COD will also be applied.

When COD occurs, Nasdaq will send unsolicited cancel accept confirmations to you when you log back on to the port. These messages will come with the client-generated ClOrdID value in tag 11. Tag 41 will also contain the original client order id entered by the customer for the order.

3 Order Entry Overview

3.1 Fields

3.1.1 Date and Time fields

All date and time fields for Nasdaq Nordic with the exception of tags 75 and 20108 are to be sent in UTC (Universal Timestamp Coordinated) physical format expressed as GMT.

Tag 75 and 20108 format is YYYYMMDD.

UTC Format is:

- YYYYMMDD-HH:MM:SS (whole seconds) format, colons, dash, and period required;

or

- YYYYMMDD-HH:MM:SS.sssssssss (subseconds down to nanoseconds) format, colons, dash, and period required. Although you may send subseconds, this is optional.

3.1.2 Price fields

All price fields will be returned with four places after the decimal.

3.1.3 Quantity Fields

Our FIX implementation varies from the FIX 5.0 standard in that we expect all quantity fields to be submitted with whole numbers. Decimals are not allowed and will reject.

3.1.4 A Note about Special Characters

Special characters (non-alphanumeric characters) should not be used in any fields (with the exception of the decimal point, in price fields). If special characters are used, Nasdaq reserves the right to replace these characters with a space. As a result, your outbound messages might contain values other than what you sent in. To avoid this occurrence, customers are advised to refrain from using any non-alphanumeric characters.

3.2 Symbologies

Users have the option of sending either the OrderBookID or the ISIN to identify the instrument they wish to trade. They cannot enter both, and any attempts to provide both will be rejected by the system.

If users wish to provide the ISIN, they should put the ISIN value into the SecurityID (48) field, 4 (ISIN) into the IDSource [22], use the Currency field (15) to identify the currency being traded in, and use the SubMkt (5815) field to identify the market segment being traded on. Set Symbol (55) = [N/A].

If users wish to provide the OrderBookID, they should put the OrderBookID into the Symbol field (55). They do not need to enter currency or submarket.

3.3 Order Functionality

3.3.1 Order Routing

Orders may be designated as eligible for routing or not eligible for routing.

If an order is not attributed as eligible for order routing (tag 76 = “BOOK”) it shall participate in the normal One-by-One matching. The order is matched starting at the most generous price level and attempts to execute each order in its priority sequence.

An order is flagged as being eligible for order routing by indicating the routing strategy via ExecBroker field, tag 76. Routing strategies are characterized by both the markets accessed and a routing type (directed, passive and reactive).

- A directed strategy bypasses Nasdaq’s book and routes directly to an away market.
- A passive strategy first attempt to execute against orders in the Nasdaq book at a price equal to or better than the relevant BBO, and then routes to other markets. If shares remain unexecuted after routing, they are posted on the Nasdaq book, and will be subject to no further routing.
- A reactive strategy behaves similarly to a passive strategy, save that it may reroute after posting if the relevant BBO locks/crosses the order.

The table below lists supported strategies.

ExecBroker	Type	Markets	Comments
BOOK	[N/A]	Only Nasdaq	
SCAN	Passive	All Markets	
DCAN	Passive	All markets, including dark pools	
DMID	-	Nordic@Mid order routed to lit Nordic book at closing auction	
DIVE	Passive	Non-displayed midpoint pegged LIS orders to interact with Nordic@Mid	
NMID	Passive	Try to execute against Nordic@Mid, post remainder in lit book	
STGY	Reactive	All Markets	
DNGY	Reactive	All markets, including dark pools	
QTSS	Passive	Time spray strategy to all markets, including dark pools.	
QTSP	Passive	Time spray price to all markets, including dark pools.	
DLTS	Passive	Time spray dark-lit sweep to all markets	

When adding support for utilizing Nasdaq's routing services, please be advised that the above list should not be considered static; rather, strategies may be added or removed as the business environment evolves.

If tag 76 is not sent, the default is BOOK.

3.3.2 Execution Algorithms

Refer to section 7.

3.3.3 Reserve Orders

In a Reserve order, a certain portion of the total volume of an order is not displayed in the Order Book. The non-displayed volume will be displayed in the Order Book in the aggregate volumes during a call interaction.

To enter a reserve order:

Tag	Field Name	Description
9140	DisplayInst	Y = Displayed
38	OrderQty	The total order quantity
111	MaxFloor	Displayed quantity, if the desire is to display only a portion of the order and not the full order quantity
6227	DisplayRange	Optional. The displayed quantity can be randomized by specifying a display range

When a Reserve Order Displayed Quantity is updated, an Order Restatement Execution Report message is sent with:

Tag	Field Name	Description
150	ExecType	D =Restated
378	ExecRestatementReason	8 = Market option
1138	DisplayQty	The current displayed quantity on the restated reserve order
198	SecondaryOrderID	Relays the ITCH order reference number

3.3.4 Hidden Orders

The following table describes how to send in a hidden order, not displayed on the book.

Tag	Field Name	Description

9140	DisplayInst	N = Non-Displayed (Hidden)

3.3.5 Nordic@Mid Orders

The following table describes how to send in a Nordic@Mid order:

Tag	Field Name	Description
18	ExecInst	M = Midpoint Peg.
211	PegDifference	Leave this field blank, no peg offset supported.
40	OrdType	P = Pegged
9140	DisplayInst	M = Nordic@Mid.
44	Price	Optional. Limit price act as a cap/floor for trade execution.
110	MinQ	Optional. Defines the smallest trade size that is acceptable.

3.3.6 Auction On Demand (AOD) Book Orders

The following table describes how to send a AOD order:

Tag	Field	Description
18	ExecInst	M = Midpoint peg P = Market R = Primary N = No Peg (default)
211	PegDifference	Leave this field blank, no peg offset supported
40	OrdType	P = Pegged 1 = Market 2 = Limit
9140	DisplayInst	A = AOD
44	Price	Optional. Limit price act as a cap/floor for trade executions
110	MinQty	Optional. In the AOD book, interpreted as the minimum executable size (MES)
59	TimeInForce	0 = DAY or; 3 = IOC or;

Tag	Field	Description
		6 = GTT or; B = GFA

3.3.7 Market Price Orders

During continuous trading, market price orders are sent as market pegged order with:

Tag	Field	Description
40	OrdType	1 = Market
18	ExecInst	P = Market (Market Peg)
211	PegDifference	0
59	TimeInForce	3 = IOC

A market price order target to participate in an auction is sent in with Cross Type (pegging not allowed):

Tag	Field	Description
40	OrdType	1 = Market
9355	CrossTradeFLag	O = Opening I = Intraday C = Closing H = Halt
59	TimeInForce	3 = IOC

A market priced order to trade regardless of which trading state the orderbook currently is in, is sent as described below. With this, the market order will be converted to participate either as a Market Pegged order during continuous trading or a Market Cross order during an auction:

Tag	Field	Description
40	OrdType	1 = Market

Tag	Field	Description
59	TimeInForce	3 = IOC
9140	DisplayInst	Y = Display

Note! FIX Tags ExecInst – [18] and CrossTradeFlag [9355] cannot be populated for the order to be converted.

3.3.8 Smart IOC Algo Orders

By applying the SmartIOC algo-stategy (SMRT) on a regular IOC order, the order will try multiple times to fill the order within 300 micro seconds, in case the order cannot be fully filed at the first try. A regular IOC order only tries one time.

The benefit of the SmartIOC strategy is to capture possible refills in the order book, and hence the SmartIOC is expected to increase the expected fill rate compared to sending a regular non-algo IOC order.

The following fields are required to send a SmartIOC order:

Tag	Field	Description
59	TimeInForce	3 = IOC
76	ExecBroker	SMRT

3.3.9 Pegged Orders in Lit Book

The following table describes how a pegged order is entered into the lit book:

Tag	Field	Description
40	OrdType	P = Pegged
18	ExecInst	M = Midpoint peg P = Market R = Primary
211	PegDifference	Optional
9140	DisplayInst	Y = Display N = Non-Display (Hidden)

Tag	Field	Description
9355	CrossTradeFlag	Cannot be used for pegged orders
44	Price	Optional. Limit price act as a cap/floor for pegged price.
59	TimeInForce	All except GTC and GFA

3.3.10 Dark Lit Sweep

The Dark Lit SWEEP order tries to match at the midpoint of Nordic@Mid, before executing as IOC in the Lit book.

The following table describes how a dark lit sweep order is entered:

Tag	Field	Description
40	OrdType	2 = Limit
20109	OrderCondition	Q = Dark-lit Sweep
59	TimeInForce	3 = IOC
9140	DisplayInst	Y = Display
44	Price	Limit price act as a cap/floor for trade execution.
110	MinQty	Optional. Defines the smallest trade size that is acceptable.

4 Application Messages

4.1 Inbound to Nasdaq

Note: An invalid FIX tag on an inbound message will result in no response.

4.1.1 New Order – Single

You use this message to send orders to Nasdaq Nordic. Orders can be submitted with special handling instructions and execution instructions.

Handling instructions refer to how Nasdaq Nordic should handle the order. The HandlInst field is required and it should always be set to 1, which indicates automated execution order, private, no Broker intervention.

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

Tag	Field	Reqd	Comments
	StandardHeader	Y	MsgType = D
11	ClOrdID	Y	Unique identifier of the order as assigned by institution. Must be 14 characters or less. ClOrdID must be unique per connector per day. GTC Carryover orders retain their ClOrdID. Therefore, keep in mind when entering orders that you will not be able to enter an order with the same ClOrdID as a pre-existing GTC Carryover order.
15	Currency	N	Conditionally required if you are sending ISIN (SecurityID [48]) instead of OrderBookID (Symbol [55]).
18	ExecInst	N	Valid values: M = Midpoint Peg N = No Peg (default) P = Market Peg R = Primary Peg
21	HandlInst	Y	This is required by FIX. Valid values: 1 = Automated execution order, private, no Broker intervention
22	IDSource	N	Identifies class of alternative SecurityID. Must be provided when SecurityID [48] is specified. Valid values: 4 = ISIN

Tag	Field	Reqd	Comments
38	OrderQty	Y	This value represents the total Order Quantity.
40	OrdType	Y	Valid values: 1 = Market 2 = Limit P = Pegged
44	Price	N	Price field is required for Limit Orders.
48	SecurityID	N	ISIN code
54	Side	Y	Side of order. Valid values: 1 = Buy 2 = Sell
55	Symbol	Y	OrderBookID or [N/A].
59	TimeInForce	N	Orders with OrdType [40] = 1 (Market) must have TIF = 3. Valid values: 0 = Day (default) 1 = GTC (Good Until Cancelled) 3 = IOC (Immediate or cancel)/FAK (Fill and Kill). Partial executions are allowed. 4 = FOK (Fill or Kill) Partial executions are not allowed unless they add up to a full execution. 6 = GTT (time is specified in tag 126 ExpireTime) B = GFA (Good for Auction). Valid for Auction on Demand.
60	TransactTime	Y	The time that you released this request.

Tag	Field	Reqd	Comments
76	ExecBroker	N	Routing Strategy. See section Order routing for more details. Valid values: BOOK = order is not eligible for routing. (default) CLOS = Algo strategy, Close DCAN = all markets plus dark pools DIVE = route to dark pools only DMID = Nordic@Mid routed to lit book at close auction DNGY = reactive version of DCAN IMSH = Algo strategy, Implementation Shortfall NMID = Try Nordic@Mid then post in lit book PNPR = Algo strategy, Performance Neutral Pair PVOL = Algo strategy, Percentage of Volume SCAN = route to all accessible markets, then post to the Nordic book STGY = reactive version of SCAN SUPR = Algo strategy, Setup Pair TWAP = Algo strategy, Time Weighted Average Price VWAP = Algo strategy, Volume Weighted Average Price QTSS = Time spray strategy to all markets, including dark pools SMRT = Algo strategy, Smart IOC QTSP = Time spray price to all markets, including dark pools. DLTS = Time spray dark-lit sweep to all markets
110	MinQty	N	MinQty is currently supported for orders with a TimeInForce [59] = 3, 4 and B or for hidden orders with TimeIn Force [59] = 0, 1, or 6. Minimum Quantity orders may be entered during the auctions; however, the minimum quantity feature will only be enforced during the continuous market and in the Auction On Demand (AOD) book. MinQty must be a round lot.
111	MaxFloor	N	Displayed quantity, if the desire is to display only a portion of the order and not the full order quantity.

Tag	Field	Reqd	Comments
126	ExpireTime	N	Required for GTT (GoodTillTime) orders, this is the time the order should be canceled at (current day). Format is UTC. The date portion must specify the current date.
211	PegDifference	N	Integer representing the number of tick increments. User has two options on entry – If you enter "+" followed by the Peg difference, the result will be that the peg difference is a positive peg difference. If you enter "–" followed by the Peg difference, the result will be that the peg difference is a negative peg difference. If you do not provide the "+" or "-" sign, the system will enter your peg difference as a positive peg difference. For example: Entering "211=+1" will result in a peg difference of one positive tick increment.
439	ClearingFirm	N	User supplied Clearing Firm. Pass-through field. (Note that the field is not forwarded to the CCP). Maximum 4 char.
440	ClearingAccount	N	Supplemental accounting information that is forwarded to the CCP. Field will only be used by the CCP if there is a bilateral agreement in place. Maximum 12 char.
528	OrderCapacity	N	(See [529] for additional designations.) Valid values: A = Agent (default) (maps to AOTC) P = Principal (maps to DEAL) R = Riskless (maps to MTCH)
529	OrderRestrictions	N	The following designations may be used in conjunction with [528] if applicable. Valid values: 5 = Acting as Market Maker or Specialist in the security (528=P) B = Issuer Holding (528=A or P) C = Issue Price Stabilization (528=A or P)

Tag	Field	Reqd	Comments
1816	ClearingAccountType	N	Designates the account type to be used for the order when submitted to clearing. Valid values: 1 = Customer (Client) - default 2 = Firm (House)
5815	SubMktID	N	Submarket ID/Market Segment. Numeric code for the desired submarket or Market Segment. Conditionally required if you are sending ISIN (SecurityID [48]) instead of OrderBookID (Symbol [55]).
6209	ClRefID	N	User-supplied client reference to be returned unchanged in the private order/trade messages. Maximum 15 characters.
6227	DisplayRange	N	Only applicable for reserve orders (MaxFloor [111] specified). Values > 1. 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.
9140	DisplayInst	N	May be used to specify different display options. The default for this tag is dependent upon the value sent in [111]. If 111=0, then the default for 9140 = N. Otherwise, the default is Y. Valid values: M = Nordic@Mid dark book N = Non-Display Y = Display (Anonymous as per market rules) A = Auction On Demand book
9355	CrossTradeFlag	N	This specifies the cross in which the order goes live. Valid values: C = Closing Cross H = Halt Cross I = Scheduled Intraday Cross O = Opening Cross

Tag	Field	Reqd	Comments
9861	BrSeqNbr	N	User-supplied order reference to be returned unchanged in the private order/trade messages. Maximum 10 characters.
168	EffectiveTime	N	Honored for execution algo orders only. The time at which the strategy should kick off. Format is UTC. The date portion will be ignored but should always contain the current date. Valid values: 9:00-17:30 = Default = a.s.a.p.
20001	Target%Volume	N	Conditionally required for the POV strategy (client must enter this field or Max % of Volume). Defines the level of market impact by maintaining a certain level of market participation. Valid values: 0.01-99.99 = Default = Null
849	Maximum%Volume	N	Conditionally required for the POV strategy (client must enter this field or Target % of Volume) Complements Target % of Volume were market participation moves between the max and min values. Valid values: 0.01-99.99 = Default = Null
20003	Minimum%Volume	N	Honored for execution algo orders only. Alternative to Target % of Volume were market participation moves between the max and min values. Valid values: 0.01-99.99 = Default = Null
20002	Aggression	N	Honored for execution algo orders only. Allowed values limited to 1-3 for the PNPR strategy. Valid values: 1-5 = Default: 1
20030	MinChildOrderValue	N	Honored for execution algo orders only. Attempts to reduce the number of trades by defining a minimum child order value.

Tag	Field	Reqd	Comments
20020	SpreadLimit	N	Conditionally required for the PNPAIR strategy. Basis point spread over or under the cash neutral price (or better) at which to trade. Can be negative.
20021	RefPriceBidLeg	N	Conditionally required for the PNPAIR strategy. Defines the base relationship between the leg symbols.
20022	RefPriceAskLeg	N	Conditionally required for the PNPAIR strategy. Defines the base relationship between the leg symbols.
20023	LagBidLeg	N	Honored for execution algo orders only. Defines how much the buy leg can execute behind the sell leg. Expressed as quantity. Valid values: > 0
20024	LagAskLeg	N	Honored for execution algo orders only. Defines how much the sell leg can execute behind the buy leg. Expressed as quantity. Valid values: > 0
20025	LeadBidLeg	N	Honored for execution algo orders only. Defines how much the buy leg can execute ahead of the sell leg. Expressed as quantity. Valid values: > 0
20026	LeadAskLeg	N	Honored for execution algo orders only. Defines how much the sell leg can execute ahead of the buy leg. Expressed as quantity. Valid values: > 0
20027	StopLossBidLeg	N	Honored for execution algo orders only. To protect against the market prices moving away when the leg lags. If current market prices are above this limit, take the loss and execute the remainder.

Tag	Field	Reqd	Comments
			Valid values: > 0
20028	StopLossAskLeg	N	Honored for execution algo orders only. To protect against the market prices moving away when the leg lags. If current market prices is below this limit, take the loss and execute the remainder. Valid values: > 0
20029	BasketID	N	Conditionally required for the PNPAIR (PNPR) and SETUP PAIR (SUPR) strategies. Unique per order pair by client and day. Identifies the pair of orders (the same value for both legs).
20031	Ratio	N	Honored for execution algo orders only. Conditionally required for the SUPR strategy. Ratio aspect of the deal involved. Valid values: > 0
20006	IWouldPrice	N	Honored for execution algo orders only. Defines a price at which the trader wants to deviate from the strategy and finish the trade. When the market reaches this price, the strategy will take out all available liquidity at this price or better.
20007	IWouldType	N	Honored for execution algo orders only. Required if IWouldPrice [20006] is specified. Valid values: 1 = Number of units 2 = Percentage (%)
20005	IWouldQty	N	Honored for execution algo orders only. Required if IWouldPrice [20006] is specified. Absolute quantity or percentage that limits the quantity to sweep. Valid values: 1 - 1 000 000

Tag	Field	Reqd	Comments
20012	CleanUpType	N	Honored for execution algo orders only. Cleanup leaves quantity style. Valid values: 1 = Market (at market). Default 2 = Contra Size (if leaves quantity <= contra size) 3 = Average Price (if market price is at or better than average price)
20013	CleanUpQty	N	Honored for execution algo orders only. Leaves quantity to activate cleanup. Valid values: > 0 = Default = 0
20004	BlockFilter	N	Honored for execution algo orders only. Threshold quantity for filtering out trades. Used to cause the algorithm to filter out any trade that is larger than this threshold. POV strategies could potentially trade inefficiently in attempting to chase the volume in a spike. Valid values: > 0 - 1 000 000 = Default = Null
20010	OnOpenType	N	Honored for execution algo orders only. If not specified, the algo does not participate in the opening. Valid values: -1 = Algo to decide 1 = Number of units 2 = Percentage (%)
20008	OnOpenQty	N	Honored for execution algo orders only. Required if OnOpenType [20010] = 1 or 2. Defines the quantity (units or %) that should be executed in the opening. Valid values: 1 - 1 000 000

Tag	Field	Reqd	Comments
20011	OnCloseType	N	Honored for execution algo orders only. If not specified, the algo does not participate in the close. Valid values: -1 = Algo to decide 1 = Number of units 2 = Percentage (%)
20009	OnCloseQty	N	Honored for execution algo orders only. Required if OnCloseType [20011] = 1 or 2. Defines the quantity (units or %) that should be executed in the closing. Valid values: 1 - 1 000 000
20014	DynamicBenchmark	N	Honored for execution algo orders only. Benchmark for dynamic behavior. Defines price sensitivity to an index. Based on the In Money and Out Money parameters, the strategy can accommodate the client's belief that prices will experience trending or mean-reverting behavior. The strategy will dynamically react to those situations by adjusting its trading rate. Valid values: 1 = Arrival. The mid-quote price for the symbol when the order arrives 2 = Price. As per the DynamicPrice [20015]
20015	DynamicPrice	N	Honored for execution algo orders only. Strike price for dynamic benchmark calculations. Required if DynamicBenchmark [20014]= 2 - Price
20016	InMoneyStyle	N	Honored for execution algo orders only. Dynamic behavior in the money Valid values: 1 = Off. Default 2 = Passive 3 = Passive High 4 = Aggressive 5 = Aggressive High

Tag	Field	Reqd	Comments
20018	OutMoneyStyle	N	Honored for execution algo orders only. Dynamic behavior out of the money Valid values: 1 = Off. Default 2 = Passive 3 = Passive High 4 = Aggressive 5 = Aggressive High
20101	STPLevel	N	Defines that the order is eligible for self-trade prevention and the scope of prevention. Valid values: 1 = MPID + Trader 2 = MPID 3 = Specified Trader Group (requires the STPTraderGroup [20103] to be specified)
20102	STPAction	N	The parameter is ignored if the STP Level is not specified. Valid values: 1 = Cancel passive order (default) 2 = Cancel aggressive order 3 = Cancel both orders 4 = Create a transfer transaction
20103	STPTraderGroup	N	Defines the trader group. Client defined values. Conditionally required for STP Level = 3, otherwise ignored.
2593	NoOrderAttributes	N	Indicates the number of instances of the repeating group OrderAttributeGrp to follow. Defaults to zero.
Repeating Group OrderAttributeGrp must occur the number of times specified in NoOrderAttributes (2593)			
2594	OrderAttributeType	Y	Required if NoOrderAttributes [2593] >0 2 = Liquidity provision activity. This flag is used to indicate whether the order is related to any sort of liquidity provision activity, as defined under MiFID II. Flag is required for the order to be considered to

Tag	Field	Reqd	Comments
			count towards meeting any obligation pursuant to the Nasdaq Liquidity Provider. 4 = Algorithmic order. Indicates that the order was placed as a result of an investment firm engaging in algorithmic trading. Corresponds to MMT Level 3.9 – Transaction Type: Algorithmic Indicator
2595	OrderAttributeValue	Y	Required if NoOrderAttributes [2593] >0 Y = Yes
453	NoPartyIDs	Y	Indicates the number of instances of the repeating group NewOrderPtyRptGrp to follow
Repeating Group NewOrderPtyRptGrp must occur the number of times specified in NoPartyIDs (453)			
448	PartyID	Y	The short code representing the client or decision maker represented by this block. Unsigned numerical only. Data corresponding to this short code must have been previously supplied, or will be supplied by the end of the calendar day, per our Rules. For clients, the following values are reserved for applicable use: Applicable to PartyRole value 3: 0 = NONE (No Client for this order) 1 = AGGR (An aggregation of multiple client orders) 2 = PNAL (Clients are pending allocation) Applicable to PartyRole value 12: 3 = NORE (Time and venue of the order instructed by the client of the Participant or by another person from outside the Investment Firm.)
447	PartyIDSource	Y	Must always be P (Short code identifier)

Tag	Field	Reqd	Comments
452	PartyRole	Y	Specifies the role of the party to the trade. At this time, only the following values are valid: 3 = Client ID 12 = Executing Trader (the Executing Decision Maker) 122 = Investor ID (the Investment Decision Maker)
2376	PartyRoleQualifier	Y	Provides further qualification of the PartyRole value. Valid values are: 0 = NONE (Only valid for reserved short codes) 22 = Algorithm [applicable to PartyRole values 12 or 122) 23 = Firm or legal entity (LEI) (applicable to PartyRole value 3) 24 = Natural person (applicable to PartyRole values 3, 12 and 122)
1724	OrderOrigination	N	Used to track order origination. Will use configured default if not provided. Valid values: 1 = Order received from a customer 2 = Order received from within the firm 3 = Order received from another broker-dealer 4 = Order received from a customer or originated with the firm 5 = Order received from a direct access or sponsored access customer
20301	TradingAtClosingPrice	N	"Y" = Participate in Trading at Closing Price "N" = Do not participate in Trading at Closing Price If not included, pre-defined configuration will be used.
20109	OrderCondition	N	Condition that in some way change the behavior of the order. "Q" = Dark-lit Sweep
582	CustOrderCapacity	N	"5" = Order sent in by Retail customer, defined as order originating from clients who are not considered to be "professional clients" according to MiFID or equivalent definition.
	StandardTrailer	Y	

4.1.2 Order Cancel Request

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:

Tag	Field	Reqd	Comments
	StandardHeader	Y	MsgType = F
11	ClOrdID	Y	Unique ID of cancel request as assigned by the institution. Must be 14 characters or less.
15	Currency	N	Conditionally required if you are sending ISIN (SecurityID [48]) instead of OrderBookID (Symbol [55]).
22	IDSource	N	Identifies class of alternative SecurityID. Must be provided when SecurityID [48] is specified. Valid values: 4 = ISIN
37	OrderID	N	Unique identifier of most recent order (from order acknowledgement). [37] is required if you are cancelling an order from one FIX connector and the order was not originally entered on that connector (cancel over any).
41	OrigClOrdID	Y	ClOrdID of the previous order (NOT the initial order of the day) when canceling or replacing an order.
48	SecurityID	N	ISIN code
54	Side	Y	Side of order Valid values: 1 = Buy 2 = Sell
55	Symbol	Y	OrderBookID or [N/A].

Tag	Field	Reqd	Comments
60	TransactTime	Y	The time that you released this request.
5815	SubMktID	N	Submarket ID/Market Segment. Numeric code for the desired submarket or Market Segment. Conditionally required if you are sending ISIN (SecurityID [48]) instead of OrderBookID (Symbol [55]).
	StandardTrailer	Y	

4.1.3 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.

Note that while it is necessary for the ClOrdID to change and be unique, the OrderID field does not necessarily have to change as a result of the Order Modification request.

Only Price, OrderQty, MinQty, MaxFloor, DisplayRange, ClRefId, ExpireTime, ClearingFirm, ClearingAccount, ClearingAccountType, BrSeqNbr, TimeInForce, CrossTradeFlag and applicable algo-parameters (refer to section 7.3) can be changed via the cancel/replace request message. If these fields were populated on the new order single, then you must submit all of these fields on the cancel/replace request so that the host knows whether your intention is to change them or not. All other fields should be retransmitted as sent in the original order.

Time priority is retained only if the sole modification to the order is a decrease in size.

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

Tag	Field	Reqd	Comments
	StandardHeader	Y	MsgType = G
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.
15	Currency	N	Conditionally required if you are sending ISIN (SecurityID [48]) instead of OrderBookID (Symbol [55]).
21	HandlInst	Y	This is required by FIX. Valid values: 1 = Automated execution order, private, no Broker intervention

Tag	Field	Reqd	Comments
22	IDSource	N	Identifies class of alternative SecurityID. Must be provided when SecurityID [48] is specified. Valid values: 4 = ISIN
37	OrderID	N	Unique identifier of most recent order (from order acknowledgement). [37] is required if you are replacing an order from one FIX connector and the order was not originally entered on that connector. Will result in a cancelation of the order. (cancel over any).
38	OrderQty	Y	Required. May be updated with the Cancel/Replace request.
40	OrdType	Y	From the original order, may not be modified. Valid values: 1 = Market 2 = Limit P = Pegged
41	OrigClOrdID	Y	ClOrdID of the previous order (NOT the initial order of the day) when canceling or replacing an order.
44	Price	N	Price is required for Limit orders. This field may be modified on cancel/replace.
48	SecurityID	N	ISIN code, this field may not be modified on a cancel/replace.
54	Side	Y	Side of order. May not be modified on cancel/replace. Valid values: 1 = Buy 2 = Sell
55	Symbol	Y	OrderBookID or [N/A]. May not be modified on a cancel/replace.
59	TimeInForce	N	The time in force of the order. May be modified in cancel/replace.
60	TransactTime	Y	The time that you released this request.

Tag	Field	Reqd	Comments
110	MinQty	N	This field may be modified on cancel/replace, only on AOD orders.
126	ExpireTime	N	ExpireTime. May be modified on a cancel/replace unless the order is for an algo strategy.
439	ClearingFirm	N	User supplied Clearing Firm. Pass-through field. (Note that the field is not forwarded to the CCP).
440	ClearingAccount	N	Supplemental accounting information forwarded to clearing house/firm. May be modified on a cancel/replace.
1816	ClearingAccountType	N	Designates the account type to be used for the order when submitted to clearing. Valid values: 1 = Customer (Client) - default 2 = Firm (House)
5815	SubMktID	N	Submarket ID/Market Segment. Numeric code for the desired submarket or Market Segment. Conditionally required if you are sending ISIN (SecurityID [48]) instead of OrderBookID (Symbol [55]).
9355	CrossTradeFlag	N	As per the order. May be modified on a cancel/replace.
9861	BrSeqNbr	N	User-supplied order reference.
6209	ClRefID	N	User-supplied client reference.
6227	DisplayRange	N	
168	EffectiveTime	N	
20001	Target%Volume	N	
849	Maximum%Volume	N	
20003	Minimum%Volume	N	
20002	Aggression	N	
20030	MinChildOrderValue	N	
20020	SpreadLimit	N	
20021	RefPriceBidLeg	N	
20022	RefPriceAskLeg	N	

Tag	Field	Reqd	Comments
20023	LagBidLeg	N	
20024	LagAskLeg	N	
20025	LeadBidLeg	N	
20026	LeadAskLeg	N	
20027	StopLossBidLeg	N	
20028	StopLossAskLeg	N	
20029	BasketID	N	From the original order, may not be modified.
20031	Ratio	N	
20006	IWouldPrice	N	
20007	IWouldType	N	
20005	IWouldQty	N	
20012	CleanUpType	N	
20013	CleanUpQty	N	
20004	BlockFilter	N	
20010	OnOpenType	N	
20008	OnOpenQty	N	
20011	OnCloseType	N	
20009	OnCloseQty	N	
20014	DynamicBenchmark	N	
20015	DynamicPrice	N	
20016	InMoneyStyle	N	
20018	OutMoneyStyle	N	
	StandardTrailer	Y	

4.2 Outbound from Nasdaq

4.2.1 Execution Report

You will receive this message:

- When Nasdaq FIX receives a New Order Single, and its destination system has accepted that order.
- When your order has been executed or if an execution is cancelled.
- By default, we will send Execution Restatements to every customer for GTC Carryover orders (see "Note" below). All other Execution Restatements will be suppressed by default. Customers who wish to see Execution Restatements other than for GTC Carryovers must specifically request them by contacting Nasdaq.

  Some orders will have its OrderID displayed on ITCH but for other orders that is not the case, reserve, peg ,and routed are prime examples of orders where the OrderID will not be used on ITCH. For these orders we send Execution Restatements to relay which IDs on ITCH that is connected to this order. This reference number is not sent on the order acknowledgement but will be in Tag 198, SecondaryOrderID on Execution Restatements. Algo orders will also get restatements when the order is accepted by the algo provider but due to the way algos work there will not be a SecondaryOrderID for algo orders.

  Note:

  Execution restatement messages are sent out whenever an order is refreshed on the host. This includes:

  - When an order is entered and is given an ITCH order reference number.
  - When a displayed pegged order is re-pegged to a new price (not hidden orders).
  - Iceberg orders (with Max floor) – if the visible quantity is refreshed. The current displayed quantity will be available in FIX Tag [1138] - DisplayQty.
  - When an algo order is accepted by the algo provider.
  - When a routed order has done its routing and has posted the order on the market.

  GTC carryover orders- GTC orders are given new OrderIDs (tag 37) and new ITCH reference numbers (tag 198) each day. We will send out an execution restatement message each morning for each GTC carryover order.

- In response to a Cancel Request. The purpose of this message is to let the user know that the Cancel Request was received by the FIX engine and passed along to the back-end host. This message is followed by either an Accepted Cancel or a Rejected Cancel after the request has been acted upon. Although there is no guarantee of sequencing, the intent is to return the Pending Cancel before the Cancel Acknowledgement. It is, therefore, incumbent upon you to have cancel processing logic that anticipates this possibility.
- In response to a Cancel Request, unless that request is rejected. The accepted cancel conveys that the remaining quantity or a portion thereof has been cancelled. Nasdaq presumes that a cancel request is for all remaining shares. Nasdaq may cancel part of the remaining quantity. This message is usually preceded by a Pending Cancel, although sequencing is not guaranteed.
- On unsolicited cancels for expired orders.
- In response to a Cancel/Replace Request, unless that request is rejected.
- In the case an order routed out is rejected. Nasdaq will pass those rejects back to the client. A reject implies that the order is terminated.
- In response to cancelling an order from one FIX connector and the order was not originally entered on that connector the Execution Report will only contain order identifying tags.

Tag	Field	Reqd	Comments
	StandardHeader	Y	MsgType = 8
6	AvgPx	Y	Used for ExecType [150]= F (Trade). "0.0" is sent in all other cases.
11	ClOrdID	Y	As per the order
14	CumQty	Y	Currently executed shares for chain of orders. Zero for ExecType [150] = 8 (Rejects)
15	Currency	N	As per the order
17	ExecID	Y	Unique identifier of execution message as assigned by Nasdaq. Will be zero (0) for restatements.
18	ExecInst	N	As per the order
19	ExecRefID	N	Reference ID for trade breaks (ExecType [150] = H (Trade Cancel)).
22	IDSource	N	Valid values: 4 = ISIN
30	LastMkt	N	In the case of restatement messages (ExecType [150]= D (Restated) for away market posted order, indicates the market (MIC code) where the order was routed. In the case of fills and partial fills (ExecType [150] = F (Trade)), indicates the execution venue. Note that separate MIC codes are used for Nordic@Mid dark book trades and AOD order book trades.
31	LastPx	N	Price of this (last) fill. Required for fills and trade breaks (ExecType [150] = F (Trade) and H (Trade Cancel)).
32	LastQty	N	Quantity of shares bought/sold on this (last) fill. Required for fills (ExecType [150] = F (Trade)).

Tag	Field	Reqd	Comments
37	OrderID	Y	The Nasdaq assigned Order Reference number. Unique for each order. “0” for ExecType [150] = 8 (Reject)
38	OrderQty	N	The order’s total quantity.
39	OrdStatus	Y	Valid values: 0 = New 1 = Partial Fill 2 = Filled 4 = Canceled 6 = Pending Cancel 8 = Rejected E = Pending Replace
40	OrdType	N	As per the order
41	OrigClOrdID	N	Returns the ClOrdID of the order to be cancelled or modified. Will be set for unsolicited cancels, including cancel-on-disconnect, as well.
44	Price	N	As per the order
48	SecurityID	N	ISIN code
54	Side	Y	As per the order
55	Symbol	Y	OrderBookID
58	Text	N	For ExecType [150] = 8 (reject), where possible, a message to explain reason for rejection. A message may also be provided for ExecType = 4 (Cancel) and 5 (Replace).
59	TimeInForce	N	As per the order
60	TransactTime	N	Transaction time.
75	TradeDate	N	YYYYMMDD
76	ExecBroker	N	As per the order

Tag	Field	Reqd	Comments
103	OrdRejReason	N	Code to identify reason for order rejection. Valid values: 0 = Broker option 1 = Unknown symbol 2 = Exchange closed 3 = Order exceeds limit 4 = Too late to enter 5 = Unknown Order 6 = Duplicate Order 7 = Duplicate of a verbally communicated order 8 = Stale Order
109	ClientID	Y	MPID of the intended recipient of this message.
110	MinQty	N	As per the order
111	MaxFloor	N	As per the order
126	ExpireTime	N	As per the order
150	ExecType	Y	Describes the specific Execution Report. Valid values: 0 = New 4 = Canceled 5 = Replaced 6 = Pending Cancel 8 = Rejected D = Restated E = Pending Replace F = Trade (partial fill or fill) H = Trade Cancel
151	LeavesQty	Y	Amount of shares open for further execution. If the order is no longer active then LeavesQty = “0”, otherwise LeavesQty = OrderQty [38] - CumQty [14].

Tag	Field	Reqd	Comments
198	SecondaryOrderID	N	Relays the ITCH order reference number for ExecType [150] = D (restatements) only. Same as OrderID [37]. In the case of orders routed out, when possible, returns the OrderID [37] used by the introducing broker. For execution algos, returns the child OrderID [37].
211	PegDifference	N	As per the order
382	NoContraBrokers	N	Number of Contra Brokers. Will always = 1 unless this is for an execution cancel.
375	ContraBroker	N	MPID of the contra party on the execution. Required for fills (ExecType [150] = F (Trade)). Otherwise optional. For execution algos, returns the child contra.
378	ExecRestatementReason	N	Required for ExecType [150] = D (Restated). Valid values: 1 = GT Renewal (This will identify the Execution Restatements that are sent each morning for GTC Carryovers) 8 = Market (Exchange) option (This should be the value for all Execution Restatements other than the GTC Carryovers)
439	ClearingFirm	N	As per the order
440	ClearingAccount	N	As per the order
528	OrderCapacity	N	As per the order
529	OrderRestrictions	N	As per the order

Tag	Field	Reqd	Comments
1003	TradeID	N	Unique trade identity over order books for both auto matched and manual reported trades during one trading day. For Execution messages, if the execution occurred on INET, the value will be a nine digit numeric only field, left padded with zeros. If the execution occurred externally, the value will begin with "F" followed by a nine digit numeric only field, left padded with zeros. For execution algos, returns the child TradeID [1003].
1138	DisplayQty	N	The currently displayed quantity on reserve order restatements.
1816	ClearingAccountType	N	As per the order
5815	SubMktID	N	Numeric code for the desired Market Segment.
6209	ClRefID	N	As per the order
6227	DisplayRange	N	As per the order
9140	DisplayInst	N	May be used to specify different display options. The default for this tag is dependent upon the value sent in [111]. If 111=0, then the default for 9140 = N. Otherwise, the default is Y. Valid values: M = Nordic@Mid dark book N = Non-Display Y = Display (Anonymous as per market rules) A = Auction On Demand book
9355	CrossTradeFlag	N	This specifies the cross in which the order goes live. Valid values: C = Closing Cross H = Halt Cross I = Scheduled Intraday Cross O = Opening Cross A = Auction On Demand

Tag	Field	Reqd	Comments
9861	BrSeqNbr	N	As per the order
9882	LiquidityFlag	N	Returned on ExecType [150] = F (Trade) messages. Valid values: 7 = Away Market Trade A = Continuous Market Trade C = Auction trade M = Nordic@Mid trade P = Auction On Demand (AOD) trade G = Trading at Closing Price Returned on ExecType [150] = H (Trade cancel) Valid value: E = Trade cancel For execution algos, returns the child LiquidityFlag [9882].
168	EffectiveTime	N	As per the order
20001	Target%Volume	N	As per the order
849	Maximum%Volume	N	As per the order
20003	Minimum%Volume	N	As per the order
20002	Aggression	N	As per the order
20030	MinChildOrderValue	N	As per the order
20020	SpreadLimit	N	As per the order
20021	RefPriceBidLeg	N	As per the order
20022	RefPriceAskLeg	N	As per the order
20023	LagBidLeg	N	As per the order
20024	LagAskLeg	N	As per the order
20025	LeadBidLeg	N	As per the order
20026	LeadAskLeg	N	As per the order
20027	StopLossBidLeg	N	As per the order
20028	StopLossAskLeg	N	As per the order
20029	BasketID	N	As per the order
20031	Ratio	N	As per the order
20006	IWouldPrice	N	As per the order

Tag	Field	Reqd	Comments
20007	IWouldType	N	As per the order
20005	IWouldQty	N	As per the order
20012	CleanUpType	N	As per the order
20013	CleanUpQty	N	As per the order
20004	BlockFilter	N	As per the order
20010	OnOpenType	N	As per the order
20008	OnOpenQty	N	As per the order
20011	OnCloseType	N	As per the order
20009	OnCloseQty	N	As per the order
20014	DynamicBenchmark	N	As per the order
20015	DynamicPrice	N	As per the order
20016	InMoneyStyle	N	As per the order
20018	OutMoneyStyle	N	As per the order
20101	STPLevel	N	As per the order
20102	STPAction	N	As per the order
20103	STPTraderGroup	N	As per the order
20104	LastExecFlagINT	N	Defines if the execution (or trade) is internalized. Valid values: 1 = Internalized
20106	LastExecFlagSTP	N	Defines if the execution (or trade) is self trade. Valid values: 1 = Self-Trade (no clear, no publish)
851	LastLiquidityInd	N	Liquidity indicator. Valid values: 1 = Added Liquidity 2 = Removed Liquidity 3 = Liquidity Routed Out 4 = Auction

Tag	Field	Reqd	Comments
2593	NoOrderAttributes	N	Indicates the number of instances of the repeating group OrderAttributeGrp to follow. Defaults to zero.
Repeating Group OrderAttributeGrp must occur the number of times specified in NoOrderAttributes (2593)			
2594	OrderAttributeType	Y	Required if NoOrderAttributes [2593] >0 2 = Liquidity provision activity. This flag is used to indicate whether the order is related to any sort of liquidity provision activity, as defined under MiFID II. Flag is required for the order to be considered to count towards meeting any obligation pursuant to the Nasdaq Liquidity Provider. 4 = Algorithmic order. Indicates that the order was placed as a result of an investment firm engaging in algorithmic trading. Corresponds to MMT Level 3.9 – Transaction Type: Algorithmic Indicator
2595	OrderAttributeValue	Y	Required if NoOrderAttributes [2593] >0 Y = Yes
487	TradeReportTransType	N	Identifies Trade Report message transaction type. Corresponds to MMT Flag 3.4 - Transaction Type: Modification Indicator Valid values: 0 = New 1 = Cancel

Tag	Field	Reqd	Comments
2667	AlgoIndicator	N	Returned on fills and partial fills (ExecType [150] = F), where the execution was the result of an investment firm engaging in algorithmic trading. Corresponds to MMT Level 3.9 – Transaction Type: Algorithmic Indicator 0 = No algorithm was involved (the default). 1 = Algorithmic.
453	NoPartyIDs	Y	Indicates the number of instances of the repeating group NewOrderPtyRptGrp to follow

Tag	Field	Reqd	Comments
Repeating Group NewOrderPtyRptGrp must occur the number of times specified in NoPartyIDs (453)			
448	PartyID	Y	The short code representing the client or decision maker represented by this block. Unsigned numerical only. Data corresponding to this short code must have been previously supplied, or will be supplied by the end of the calendar day, per our Rules. For clients, the following values are reserved for applicable use: Applicable to PartyRole value 3: 0 = NONE (No Client for this order) 1 = AGGR (An aggregation of multiple client orders) 2 = PNAL (Clients are pending allocation) Applicable to PartyRole value 12: 3 = NORE (Time and venue of the order instructed by the client of the Participant or by another person from outside the Investment Firm.)
447	PartyIDSource	Y	Must always be P (Short code identifier)
452	PartyRole	Y	Specifies the role of the party to the trade. At this time, only the following values are valid: 3 = Client ID 12 = Executing Trader (the Executing Decision Maker) 122 = Investor ID (the Investment Decision Maker)
2376	PartyRoleQualifier	Y	As per the order.

Tag	Field	Reqd	Comments
1430	VenueType	N	Returned on ExecType [150] = F (Trade) messages. Corresponds to MMT Level 1 – Market Mechanism. B = Central Limit Order Book D = Dark Order Book O = Off Book (Away market trades) A = Periodic Auction z = Other Market
625	TradingSessionSubID	N	Returned on ExecType [150] = F (Trade) messages. Corresponds to MMT Level 2 – Trading Mode (Session). 2 = Scheduled Opening Auction 3 = Continuous Trading 4 = Scheduled Closing Auction 5 = Post-Trading 6 = Scheduled Intraday Auction 9 = Unscheduled Auction 14 = On Demand Auction (AOD)
574	MatchType	N	Returned on ExecType [150] = F (Trade) messages. Corresponds to MMT Level 2 – Trading Mode (Trade Reporting). 3 = Confirmed Trade Report (away market trades)
828	TrdType	N	Returned on ExecType [150] = F (Trade) messages. Corresponds to MMT Level 3.1 – Transaction Type: Transaction Category 62 = Dark Trade 0 = Regular Trade

Tag	Field	Reqd	Comments
1115	OrderCategory	N	Returned on ExecType [150] = F (Trade) messages. Corresponds to MMT Level 3.2 – Transaction Type: Negotiation Indicator 3 = Privately Negotiated Trade - = No Negotiated Trade
1724	OrderOrigination	N	This flag is used to indicate whether DEA activity (as defined under MiFID II) is involved in the order. Returned on ExecType [150] = 0 (New), F (Trade) messages. As per the order. Will only be provided if provided on the inbound order message or if the default is DEA.
2668	NoTrdRegPublications	N	Indicates the number of instances of the repeating group TrdRegPublicationGrp to follow. Defaults to zero.

Repeating Group TrdRegPublicationGrp must occur the number of times specified in NoTrdRegPublications (2668)

2669	TrdRegPublicationType	N	0 = PreTradeTransparancyWaiver
2670	TrdRegPublReason	N	2 = No preceding order in book as transaction price is subject to conditions other than current market price (Corresponds to MMT Level 3.2 – Transaction Type = PRIC). 3 = No public price for preceding order as public reference price was used for matching orders (Corresponds to MMT Level 3.5 – Benchmark or Reference Price Indicator = RFPT flag) 9 = No public price and/or size quoted as transaction is "large in scale"

Tag	Field	Reqd	Comments
20301	TradingAtClosingPrice	N	Indicates if the order should participate in trading at closing price. "Y" = Participate in Trading at Closing Price "N" = Do not participate in Trading at Closing Price (default)
20107	OriginalOrderReferenceNumber	N	Original Order Reference Number for a restated GoodTilCancel order. Note: Updated when order is replaced.
20108	OriginalOrderEntryDate	N	YYYYMMDD - Original Order Entry Date for a restated GoodTilCancel order. Note: Updated when order is replaced.
20109	OrderCondition	N	Condition that in some way change the behavior of the order. "Q" = Dark-lit Sweep
582	CustOrderCapacity	N	"5" = Order sent in by Retail customer, defined as order originating from clients who are not considered to be "professional clients" according to MiFID or equivalent definition.
	StandardTrailer	Y	

4.2.2 Rejected Cancel

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

Nasdaq will include tag 102. Specific causes will be detailed in tag 58.

The format of the Order Cancel Reject Message is as follows:

Tag	Field	Reqd	Comments
	StandardHeader	Y	MsgType = 9
11	ClOrdID	Y	As per cancel or cancel/replace request

Tag	Field	Reqd	Comments
37	OrderID	Y	If the cancel reject is for an unknown order this field will contain the text “NONE”. Otherwise, it will contain the OrderID of the last order in the chain of orders.
39	OrdStatus	Y	Will contain the most recent status of the order or 8 = Rejected.
41	OrigClOrdID	Y	As per cancel or cancel/replace request
58	Text	N	Where possible, message to explain reason for rejection.
60	TransactTime	N	Transaction time.
102	CxlRejReason	N	Code to identify reason for cancel rejection. Valid values: 0 = Too late to cancel (Order already cancelled) 1 = Unknown order (Original order unacknowledged) 2 = Broker Option - used for the following reasons: Market Closed; Unknown MPID; Duplicate ClOrdId; Routing Not Allowed; Qty greater than account limit or less than 0; Replace qty to less than exhausted; Invalid price; Order should be tick adj but tick adj rejects are active; Replace changes nothing; New order not allowed per market conditions; Poss dup order when poss dup is not allowed 3 = Order already in Pending Cancel or Pending Replace status
109	ClientID	Y	The MPID of the intended recipient of this message.
434	CxlRejResponseTo	Y	Identifies the type of request that a Cancel Reject is in response to. Valid values: 1 = Order Cancel Request 2 = Order Cancel/Replace Request
	StandardTrailer	Y	

4.2.3 Order Reject Text & Cancel and Cancel/Replace Reasons

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

5 Appendix A - Max Lengths

Tag	Max Length
11	14
37	32
41	14
55	6
440	12
439	4
571	20
582	1
851	1
880	10
5149	10
5815	3
6204	20
6205	20
6209	15
9292	4
9861	10
20029	15
20101	1
20102	1
20103	2
20104	1
20106	1

20107	32
20108	8
20109	1
20301	1

6 Appendix B - Data Types

Tag	Field	Data Type
851	LastLiquidityInd	Char
5815	SubMktID	String
6209	ClRefID	String
9140	DisplayInst	Char
9355	CrossTradeFlag	Char
9861	BrSeqNbr	String
9882	LiquidityFlag	Char
20001	Target%Volume	float
20002	Aggression	int
20003	Minimum%Volume	float
20004	BlockFilter	Qty
20005	IWouldQty	Qty
20006	IWouldPrice	Price
20007	IWouldType	int
20008	OnOpenQty	float
20009	OnCloseQty	float
20012	CleanUpType	int
20013	CleanUpQty	Qty
20014	DynamicBenchmark	int
20015	DynamicPrice	Price
20016	InMoneyStyle	int
20017	InMoneyAggression	int
20018	OutMoneyStyle	int

20019	OutMoneyAggression	int
20020	SpreadLimit	float
20021	RefPriceBidLeg	Price
20022	RefPriceAskLeg	Price
20023	LagBidLeg	Qty
20024	LagAskLeg	Qty
20025	LeadBidLeg	Qty
20026	LeadAskLeg	Qty
20027	StopLossBidLeg	Price
20028	StopLossAskLeg	Price
20029	BasketID	String
20030	MinChildOrderValue	Int
20031	Ratio	float
20101	STPLevel	Char
20102	STPAction	Char
20103	STPTraderGroup	String
20104	LastExecFlagINT	Char
20106	LastExecFlagSTP	Char
20107	OriginalOrderReferenceNumber	Int
20108	OriginalOrderEntryDate	YYYYMMDD
20109	OrderCondition	Char
20301	TradingAtClosingPrice	Char

7 Appendix C – Execution Algorithms

7.1 Message Flow

Execution algo orders are entered over the FIX Order Entry connection. INET passes those "parent" orders into the algo engine. The algo engine sends "child" orders back into INET for execution. Clients receive parent order execution reports back when executions happen. The below diagram depicts the message flow.

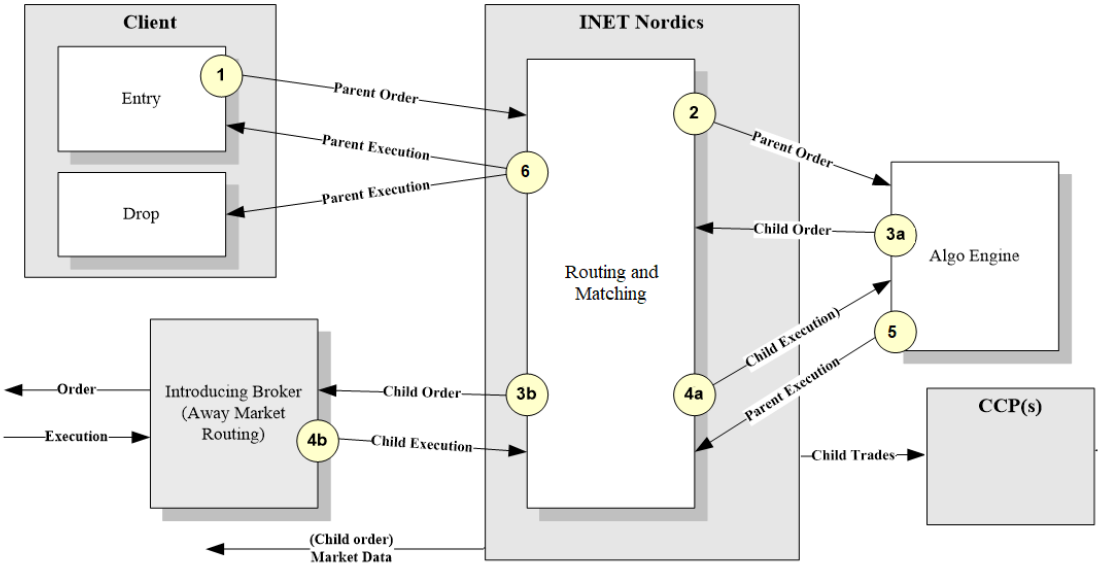

Figure 1. Algo Order Message Flow
Explanation of the numbers in the figure:

1. *Algo "parent" orders are entered over the FIX Order Entry connection (or via Nordic Workstation) by the client and sent to INET (ODIN). Parent orders provide the mechanism that allows client to request Algos and for INET to report executions back to the client. The Parent is not a "real" order to the market.*
2. *INET passes those "parent" orders into the Algo engine.*
3. *The Algo engine sends "child" orders back to INET Router. INET Router sends based on instruction from Algo engine child orders to:*
    a. *INET Matcher or*
    b. *after being Smart Order Routed to Away markets for execution. Although child orders are in the name of the client, they are not exposed to the member by INET.*
4. *Child executions are gathered by INET. Child orders are the ones that technically trade, clear and settle and that are published in the market data feed. The child executions are sent to Algo engine and to CCP for clearing. Child executions are not relayed as such to clients.*
5. *Algo Engine sends Parent execution to INET.*
6. *INET sends parent executions back to the client. Separate FIX drop for Child orders and linkage to Parent order is available.*

Child orders are the ones that technically trade, clear and settle. Parent orders provide the mechanism that allows client to request them and INET to report executions back to the client. Every child execution will be reported back to the client as an individual parent execution.

Although child orders are in the name of the client, they are not exposed to the client over the order entry lines. Child orders and executions are however exposed over public lines as ITCH and to the CCP. In order to enable clients to map parent orders and executions to downstream child ones, the following execution related identifiers of the child order are passed on parent executions:

- SecondaryOrderID [198] relays the child OrderID [37]
- TradeID [1003] from the child order
- ContraBroker [375] from the child order
- LiquidityFlag [9882] from the child order

Child orders include the following parent order instructions.

- ClearingFirm [439]
- ClearingAccount [440]
- OrderCapacity [528]
- OrderRestrictions [529]
- ClRefID [6209]
- BrSeqNbr [9861]

Child order restatements will not be forwarded as parent order restatements.

Users should be aware that the INET router does not support Order Cancel Replace (order modification) internally. When a client sends an Order Cancel Replace, INET converts it into a cancel of the old order and a new order.

7.2 Entry of an Algo Order

The requested strategy is defined in the ExecBroker [76] field. The following strategies can be used:

- TWAP (Time weighted average price)
- VWAP (Volume weighted average price)
- PVOL (Percentage on volume)
- IMSH (Implementation shortfall)
- CLOS (Close)
- PNPR (Performance Neutral Pair)
- SUPR (Setup Pair)

Further algorithmic parameters are listed in the following section.

Execution algo orders limitiations:

- OrdType [40] = 2 – Limit
- TimeInForce [59] = 0 – Day or; 6 – Good-Till-Time
- CrossTradeFlag [9355], MaxFloor [111] and MinQty [110] are not allowed
- DisplayInst [9140] = Y (but note that publication applies only to child orders)

The PNPR and SUPR strategies do not support Order Cancel Replace. The user must cancel the current orders and enter new ones with a new BasketID [20029].

7.3 FIX Algorithmic Parameter Fields

The below table shows the parameters that can be used for the various algo strategies. All parameters are optional unless explicitly mentioned as required.

Parameter	POV	VWAP	TWAP	IS	CLOSE	PNPAIR	SUPR	Modifiable	FIX Field	Algo speicifc Field
7.3.1 Base Parameters										
Limit Price	X	X	X	X	X	X	X	Y	Price [44]	N
Start Time	X	X	X	X	X	X	X	Y	EffectiveTime [168]	Y
End Time	X	X	X	X	X	X	X	Y	ExpireTime [126]	N
Target % of Volume	X							Y	Target%Volume [20001]	Y
Max % of Volume	X	X	X	X	X	X	X	Y	Maximum%Volume [849]	Y
Min % of Volume	X	X	X	X	X			Y	Minimum%Volume [20003]	Y
Aggression				X	X	X	X	Y	Aggression [20002]	Y
Minimum Child Order Value	X	X	X	X	X	X	X	Y	MinChildOrderValue [20030]	Y
Spread Limit						X	X	Y	SpreadLimit [20020]	Y
Reference Price Bid Leg						X		Y	RefPriceBidLeg [20021]	Y
Reference Price Ask Leg						X		Y	RefPriceAskLeg [20022]	Y
Lag Bid Leg						X	X	Y	LagBidLeg [20023]	Y
Lag Ask Leg						X	X	Y	LagAskLeg [20024]	Y
Lead Bid Leg						X	X	Y	LeadBidLeg [20025]	Y
Lead Ask Leg						X	X	Y	LeadAskLeg [20026]	Y

Parameter	POV	VWAP	TWAP	IS	CLOSE	PNPAIR	SUPR	Modifiable	FIX Field	Algo speicifc Field
Stop Loss Bid Leg						X	X	Y	StopLossBidLeg [20027]	Y
Stop Loss Ask Leg						X	X	Y	StopLossAskLeg [20028]	Y
Basket ID						X	X	N	BasketID [20029]	Y
Ratio							X	Y	Ratio [20031]	Y
7.3.2 Enriched Parameters – Finish the Trade										
I Would Price	X	X	X	X	X			Y	IWouldPrice [20006]	Y
I Would Type	X	X	X	X	X			Y	IWouldType [20007]	Y
I Would Qty	X	X	X	X	X			Y	IWouldQty [20005]	Y
Clean Up Type	X	X	X	X	X			Y	CleanUpType [20012]	Y
Clean Up Qty	X	X	X	X	X			Y	CleanUpQty [20013]	Y
Block Filter	X	X	X	X	X	X	X	Y	BlockFilter [20004]	Y
7.3.3 Enriched Parameters – On Open / Close Quantity										
On OpenType		X	X	X				Y	OnOpenType [20010]	Y
On Open Qty		X	X	X				Y	OnOpenQty [20008]	Y
On CloseType		X	X		X			Y	OnCloseType [20011]	Y
On Close Qty		X	X		X			Y	OnCloseQty [20009]	Y

Parameter	POV	VWAP	TWAP	IS	CLOSE	PNPAIR	SUPR	Modifiable	FIX Field	Algo speicifc Field
7.3.4 Enriched Parameters – Dynamic Behavior										
Dynamic Benchmark	X	X	X	X	X			N	DynamicBenchmark [20014]	Y
Dynamic Price	X	X	X	X	X			Y	DynamicPrice [20015]	Y
In Money (Style)	X	X	X	X	X			Y	InMoneyStyle [20016]	Y
Out Money (Style)	X	X	X	X	X			Y	OutMoneyStyle [20018]	Y